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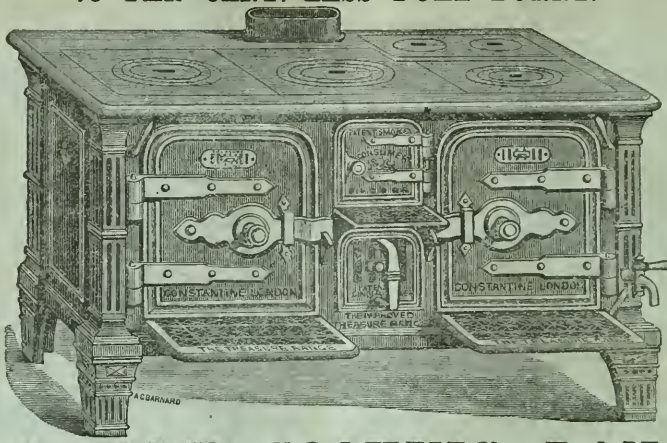

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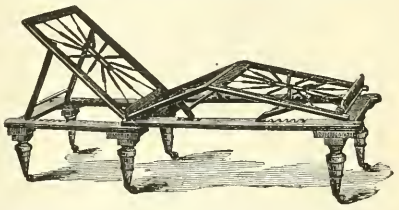

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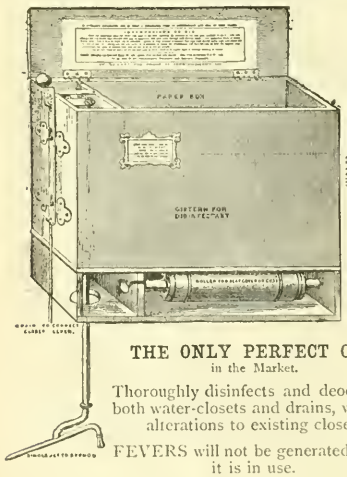

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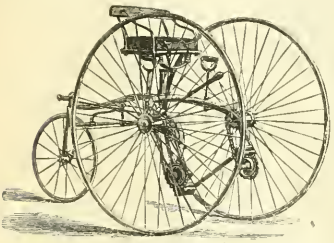

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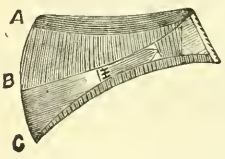

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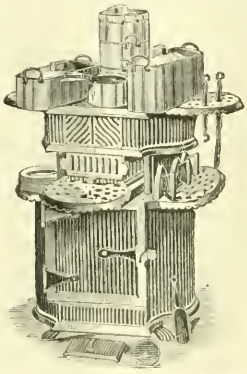

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REICHERT AND TUCKER ON POISONING BY ACONITE.

Dr. Edward T. Reichert (*Philadelphia Med. Times*, Nov. 19, 1881, p. 105) summarises forty-one cases of aconite-poisoning, to which is added an appendix of an analysis by Tucker of fifty-three cases. Of the 41 cases, 28 recovered and 13 died. One died in 30 minutes, one in 1¾ hours, one in 2¼ hours, two in 3 hours, one in 3½ hours, one in 4 hours, two in 5 hours, one in 5½ hours, and in three cases the time was not recorded. The average time of the occurrence of death from the time of the ingestion of the poison twas 3½ hours. Symptoms appeared in seven cases immediately, in eight within half an hour, in seven within 1 hour, in two in 1½ hours, in four in 3 hours, in one in 3½ hours; the time is not stated in thirteen.

Difficulty of swallowing appeared in 8, of articulation in 5; articulation remained perfect in 1; salivation occurred in 1, increase of the secretions generally in 1, lacrymation in 2, dryness of the throat in 3, intense thirst in 4, constriction of the throat in 1, choking sensation in 1, retching in 5, nausea in 3, vomiting in 17. The matters vomited smelt of camphor in 1, of alcohol in 1, of aconite in 1. The matters vomited had the appearance of a fluid resembling gravy with stringy mucus in 1, a dark grumous liquid in 2; they were bilious in 2, mucous in 2. There was purging in 6, involuntary defecation in 2, tympanites in 1, diuresis in 1; frothy saliva was spat up in 3. Pain was great in 3, in the stomach in 9, severe in 3, general lancinating in 1, around the waist in 1, down the spine in 2, in the head in 3. There was a burning sensation in the stomach and bowels in 6, in the tongue and fauces in 6. Vertigo occurred in 6, tremulousness in 2, a comatose condition in 1, stupor in 1. Consciousness remained perfect in 11, consciousness was lost in 5, consciousness was lost for a few seconds at a time or at intervals in 3. Sensibility was diminished in 3; numbness was general in 10, in the tongue in 6, in the extremities in 5, in the back in 1, in the face in 5, in the arms and hands in 4. There was tingling in 15, pricking in a few, sensation of some parts of the body being swelled in 3, tinnitus aurium in 1, impaired sense of hearing in 1, desire to sleep in 8, delirium in 3, semi-delirium in 2, groaning in 1, sighing in 1, faintness in 7, attacks of depression in 2, great depression in 10, restlessness in 8, rigors in 1, aphonia in 1.

Convulsions were tetanic in 1, general in 3, slight in 2, facial in 5; convulsive movements were present in 8. Trismus occurred in 2. There was paralysis of the lower jaw in 1, of the lower extremities in 1; the hands were clenched in 1, there was staggering in 4, muscular inertia or relaxation in 11, collapse in 8. Respiration was laboured in 8, slow in 5, short and hurried in 2, quiet and regular in 2, dyspnœeic in 1, hurried and laboured in 1, slightly stertorous in 1, quick and sighing in 1. The pulse was feeble or imperceptible in 11, slow and feeble in 9, slow, feeble, and irregular in 7, feeble and irregular in 5, slow in 1, rapid and tumultuous in 1, rapid, feeble, and irregular in 1, slow, followed by frequency and irregularity, in 1. Temperature was lowered in 3, diminution was followed by a rise in 1. The pupils were dilated in 17, slightly contracted in 1, alternately contracted and dilated in 1, not dilated in 1, insensible to light in 3; there was amblyopia in 5, diplopia in 1; the conjunctiva was injected in 1, the eyes were staring in 2, fixed and sparkling in 2, fixed, sparkling and brilliant in 2; lacrymation occurred in 2. Perspiration was profuse in 2, cold and clammy in 18; there was coldness of the extremities in 14, general in 4, along the spine in 1. Lividity was present in 3. The countenance was pale in 12, anxious in 3, pinched in 2, livid in 2, flushed in 2, hypochondriacal in 1, depressed in 1, heavy in 1, dusky in 1, expressive of agony in 2, calm in 1, haggard in 1, shrunk in 1, expressionless in 1.

Among the symptoms of aconite-poisoning not particularly specified in the above analysis are many that are either curious or of special interest. In some of the cases there was very marked jactitation, the head being constantly tossed about, or some portion of the body being kept constantly moving, or the patients constantly throwing themselves about violently, etc. The eyes in one case were described as feeling as if they would drop out; in others, certain portions of the body felt as if swollen, and even many times the natural size, the head especially being complained of. In one instance a sensation of tightness across the eyes and nose was present, with a feeling in the head as if distorted by the pressure of a vice. Heaviness of the feet and legs, in all probability similar to the sensation which occurs in haschish and certain other forms of poisoning, was also noted; and in one case the sensation was described as though the legs were going away from the patient. In another case the teeth felt as if loose; and in another, peculiar sensations about the roots of the teeth, appearing two days after the injestion of the poison, were noted. Aphonia continued in one case for over two weeks. Delightful dreams in several cases are recorded, and in one the dream was said to be 'horrid'. An hysterical condition was developed in one, and in another a peculiar cry was now and then uttered. A dreadful sensation in the pit of the stomach has also been recorded. In several cases, the great danger of raising the patient from the recumbent position was forcibly illustrated in the alarming symptoms, and even fatal results, which followed such indiscretion. The respiration and pulse were sometimes reduced to an extraordinary degree, the former to five or six a minute, and the latter as low as twenty a minute, and the patient recovered. In one case the temperature was lowered 14.2 deg. Fahr. (!) below the normal, and the patient recovered.

An analysis of 12 necropsies gave the following results. The face and skin were pale in 2. Rigor was well marked in 5, no rigor in the upper extremities in 1; there was general flaccidity of muscles in 1, erection of the penis and ejection of seminal fluid in 1. The heart was normal in 1, empty in 1, flaccid in 2; the right ventricle was flaccid in 2, nearly empty in 1, contained blood in 3, was distended with blood in 4; the left ventricle contained blood in 2, was empty in 3, full in 1, contracted in 5, firmly in 2; the blood was dark and fluid in 6, slightly coagulated in 1; there were loose black clots in the heart in 1. The lungs were emphysematous in 2, infiltrated in 2; the lower lobes were congested in 1; the dependent parts were congested in 2, the dependent

portions were somewhat œdematous in 1; the lungs were healthy in 1, slightly congested in 1, contained sero-sanguinolent fluid in 1, were black over the entire structure in 1, friable without induration in 1; the mucous surface of the bronchi was congested in 1; the pleura was healthy in 1. In the brain, the vessels did not appear congested in 3; the vessels were full of blood in 2, the vessels of the dura mater were congested in 3, natural in 1; the membrane was adherent in 1; the arachnoid contained a large quantity of fluid in 1, a slightly excessive amount of fluid in 1, a normal amount of fluid in 3; it was congested in 1; the brain-substance was congested in 1; normal in 8. The tongue was redder than natural in 1; the pharynx and fauces were slightly congested in 1, of a violet tinge in 1; the œsophagus was congested in 3, having a violet tinge in 1. The stomach was empty in 1; it contained grumous fluid in 2, blood and mucus in 2, a brownish fluid in 1, a viscid reddish fluid in 3, a grey thick fluid in 1; the surface of the mucous membrane was congested and sometimes noted as possessing a bright scarlet hue in 7; it was softened in 2, highly congested in 3, there were patches of congestion in 3; the surface had a chocolate colour in 1, there were reddish-brown patches at the cardia in 1, the action was confined principally to the cardiac end or greater curvature in 5, there was ecchymosis in 5. In the duodenum, the mucous membrane had a scarlet or pale rose colour in 3, was congested in 3, ecchymotic in 1, the duodenum contained a reddish fluid in 3. The small intestine had a bright scarlet colour in the upper portion, which gradually became darker, blackish or brownish, as the jejunum was reached, in 2. The spleen was congested in 3. The liver was congested in 2, healthy in 1, enlarged in 1, the borders were coloured dark brown in 1. The kidneys were congested in 3, intensely congested in 1, rather softer than usual in 1. The viscera were healthy in 1, generally congested in 1.

Treatment.—The general plan of treatment pursued in a vast majority of the cases was the evacuation of the stomach, the administration of stimulants in liberal amounts, and the application of external stimuli.

Opium or its preparations were used in four cases, all of which terminated favourably. In one case, the quantity administered is not stated; in one, half grain doses of sulphate of morphia were given; in another, three hypodermic injections of fifteen minims each were practised in a short time; in the fourth case, five and a half drachms of laudanum were administered in four hours, without inducing any symptoms of narcotism.

Digitalis was administered in connection with other stimulants, in two cases. One died. The one which recovered, and which had taken an ounce of Fleming's tincture, was given three hypodermic injections of twenty minims each within an hour.

Amyl-nitrite was used in one case with immediate relief to the spasms; the pulse became stronger, and the deadly pallor of the face disappeared. This substance is a powerful cardiac stimulant, and promises such good results in this form of poisoning as to deserve a fair and extended trial. Tincture of nux vomica was used in one case in three-drop doses every twenty minutes, and, as the practitioner stated, with marked benefit to the heart and respiration. Strychnia has also been employed.

The following is an analysis of 53 cases made by Tucker. There were 47 adults; 6 children. Males 24; females 12; sex unknown, 17. Four each took three drachms of the root; two recovered, two died. One took one and one half roots, and died. One took a half of a root, and recovered. Two each took a small piece of a root; one recovered, one died. Three took an unknown quantity of the root; all died. Six took a quantity of the leaves; three recovered, three died. One took the leaves and flowers, and died. Twelve each took two and a half ounces of the fresh juice; nine recovered, three died. Two each took one-half ounce of the saturated tincture; one recovered, one died. One took one-half ounce of the tincture of the root, and died. One took a mouthful of the tincture, and recovered. One took fifteen minims of the strong tincture, and recovered. One took one and one-half ounces of the tincture (Paris Codex) and recovered. Three each took one ounce of tincture of the root, one recovered, two died. One took twenty-five minims in twenty minims of tincture of belladonna and one drachm of tincture of musk, and died. Two each took one drachm of the saturated tincture; both recovered. Five took an unspecified amount of the tincture of the root; two recovered, three died. One took two ounces of the decoction, and died. Three each took five grains of the fresh extract; two recovered, one died. One took two and one-half grains of aconitine, and recovered. One took eighty minims of the tincture in ten doses, and died. One took an ounce of Fleming's tincture, and died.

The recoveries were 27; the deaths 25. Two died in a short time; one in one and one-quarter hours, eight in two hours; one in two and one-quarter hours; one in two and one-half hours; four in three hours; one in a few hours; one in five hours; one in seven hours; one in six days.

Symptoms occurred in three immediately, all recovered; shortly after taking the poison in ten, of whom five recovered, five died; in a quarter of an hour in four, of whom three recovered, one died; in two hours in one, who died. No time was given in 34 cases. Tingling and pricking or burning sensations occurred in 26; not mentioned in 27. Vomiting was present in 28, early in 20, not until emetics were given in 5; there was no emesis, except by emetics in 8; vomiting was violent in 11, copious in 4, slight in 1; the matter ejected was green, livid, and bilious in 13; there was no nausea in 1. Diarrhœa occurred in a few; purging in 12. The pupils were dilated in 18 (early in 15, late in 3); contracted in 2 (both early); natural in 1; the condition is not stated in 31. There was restlessness in 16. The surface was cold and sweating in 30. Respiration was short, hurried, and laboured in 20; stertorous in 1; not noticed in 31. There were severe pains in the abdomen in 19; a copious flow of saliva occurred in 1; dysphagia in 3; inability to walk in 3; vision was dim in 5; there was total blindness in 1; almost blind 1. The intellect was entire in 12; there was stupor or unconsciousness in 5; not mentioned 35; paralysis occurred in 3; there was no paralysis of either sensation or motion in 1; idiotic, 1; apoplectic, 1; speechless, 1; there was difficulty of articulation in 1; speech was thick in 1; there was staggering in 2; general convulsions in 7; trismus in 4; twitchings of the facial muscles in 1; excessive tremblings in 1; tremors in 3; cramps in 14; shivering in 2; great weakness in 15; headache and vertigo in 14 (slight in 1, violent in 13); delirium in 4 (slight in 2, violent in 2); occasional incoherence in 2; no delirium or sleeplessness in 2. The pulse was

frequent, weak, and often imperceptible in 16; slow and irregular in 4. The lips were blue in 2; the countenance was livid in 1; the nails were livid in 12. There was foaming at the mouth in 2; a sense of swelling of the tongue or face in 13; of the limbs in 1. The hands were clenched in 2. There was syncope in 3; tenderness of the epigastrium in 7. The eyes were glaring and protruded in 1; fixed in 1.

An analysis of eleven necropsies showed that the lungs were congested in 7; the vessels of the brain were engorged in 5; the vessels of the pia mater were highly congested in 3. The mucous membrane of the stomach was red in 6; there were patches of dark colour on its surface in 3. The intestines were congested in patches or otherwise in 6. The rectum and œsophagus were very red in 3. There was serous effusion under the arachnoid in 4, at the base of the brain in 3; the abdomen was swollen in 2; the bowels were filled with air in 2; The stomach was empty in 2; contained grey coloured liquid in small quantity in 3; was filled with gas in 3; the right side of the heart was filled with dark blood in 1. The liver, spleen, and kidneys were engorged in 1; healthy in 1. The blood was unusually fluid in 1. T. Stevenson, M.D.

SOUBBOTINE ON THE APPRECIATION OF THE INFECTIOUS QUALITY OF MICROPHYTES,

AND THEIR PROPAGATION IN THE ORGANISM.*

It is not to be disputed that the virulent substances which produce infectious affections or pyæmia, in patients with open sores, enter the organism by the sore itself. Whether they develop in the wound, or enter already developed, is a question to decide.

In the two hypotheses, they are slowly introduced in small quantities in accordance with the laws of absorption. A wound with two openings—a seton-wound—is best calculated to realise this progressive introduction. A skein of silk or of hemp, or a drainage-tube, is kept in the wound to prevent it from healing too quickly. The virulent substance is injected into the wound by means of a syringe; or the seton-thread, or drainage-tube, is moistened by it. The animals thus treated are killed at different periods. The propagation of bacteria in living tissues can thus be studied, also the changes they undergo.

In the examination of the liquids, a drop of pus or blood is placed on a glass-slide; the morphological elements are fixed by osmic or chromic acid by the following method. The section, either wet or dried, is kept for some minutes over the mouth of a bottle containing a few drops of osmic acid, in solution at 1 per 100. When chromic acid is used, a layer of the liquid under examination is placed on a glass-slide, and dried over a spirit-lamp, then immediately washed several times in a solution of chromic acid of 1 per 200, or 1 per 300. This is a method of M. Malassez, who uses it for other researches. After the hardening process the sections are washed in distilled water, and in a solution of aniline green and water of 1 per 1,000. Afterwards they are washed for twenty or forty minutes in distilled water, slightly acidulated, in order to remove the colour of the nucleoles of the cells. The protoplasmic granulations remain colourless. The sections are washed a second time, with great care, in distilled water, then treated with a weak solution of picrocarminate of potash, again washed, and dried by exposure to air, or by pure alcohol, if it is necessary. When bacteria are present, they are easily distinguished—they are coloured green; the serum of the pus is slightly green; dead white spots indicate the former presence of bacteria, which have been carried away by the washing.

Small fragments of tissues taken, for instance, from the walls of an abscess of a rabbit just killed, are macerated for twenty-four hours in a solution of osmic acid of 1 in 300; they are immediately treated by ordinary alcohol; after an interval of twenty-four or twenty-eight hours, they are sufficiently compact for making sections. These sections are treated in the same way as the liquids after they are hardened, but it is more difficult to determine the time necessary for the reagents to act. The bacteria are easily distinguished, either when isolated or in groups. If the fragments of tissue have not been macerated eight days in alcohol, they must be treated with distilled water, acidulated by acetic acid, otherwise there will be a deposit. For colouring spherical bacteria, M. Soubbotine prefers green methylene to any other aniline. It is indispensable that the granulations, which are always present in the cells of healthy tissues, should be carefully studied before these examinations are made, otherwise it will be difficult to avoid errors. W. Vignal.

* Laboratoire d'Histologie du Collège de France. *Travaux de l'Année* 1881. Paris: Masson.

DUMONTPALLIER AND CHARCOT ON HYSTERIA AND HYPNOTISM.

M. Dumontpallier has communicated to the Biological Society of Paris the results of his clinical observations and experiments on the hysterical patients in his wards. By means of a current of air proceeding from a pair of bellows, he causes the contractions which follow an attack of hysteria to disappear. In the case of a patient attacked by melancholia, hypnotism, brought on after an hysterical attack by looking fixedly at the patient, modified considerably her mental condition, and she remained seven days free from the recurrence of an attack of depression.

M. Dumontpallier has assured himself by means of Drummond's light, transmitted across a crystal prism, that the extra reds and violets of the spectrum exercise an action on the surface of the skin, which action determines muscular contraction. Sound produced at a distance, and transmitted by means of an India-rubber tube to the surface of the skin of an hysterical patient when hypnotised, determines muscular contractions. When the ticking of a watch is transmitted by this method, the muscular contractions are synchronous with the watch; if the watch be removed, the muscular contractions cease. Similar experiments were made with the telephone and microphone; very slight vibrations of these instruments were sufficient to induce muscular contraction. These contractions became more marked when the operator looked fixedly at the plate, or when a luminous ray was thrown on to it.

At a meeting of the Biological Society on Jan. 14, M. Dumontpallier described the phenomena resulting from the action of a current of air, created by a pair of bellows, and directed this time towards different regions of the scalp during the hypnotic cataleptic sleep in hysteria; also the phenomena consequent on irritating by the prick of a pin the different regions of the scalp corresponding to the cortical

regions of the brain described as motor. M. Charcot's communications induced M. Dumontpallier to make these experiments, because he considered it must be difficult to localise within a given limit of the surface of the cranium and the cerebral mass, the action of an electric current of from four to ten of Leclanché's elements. On pricking with a pin the above-named cranial regions, there were movements of the arms and legs, rotation and flexion of the head. These movements differed according to the point of the scalp irritated. If the pin were kept in its place, and if, after two or three minutes it were pressed on, the limbs and head resumed their normal position. A prick on the opposite side of the cranium to that originally irritated had the same effect. These experiments were repeated fifty times in different patients; with uniform results.

The first series of experiments were made: 1, on the scalp of an hysterical patient whilst in the cataleptic period of hypnotism, and who, for several days, had recovered the sensibility of the scalp by the application of metallic plates to the middle of the forehead; 2, on a patient who, consequent on the application of a metal plate on a level with the left frontal protuberance, fell alternately into a cataleptic state and a state of contraction (*contracture*). The prick of a pin on the same side as that where the sensibility was maintained by means of a metal plate, was attended by crossed movements of the arms and legs. Pricking with a pin the insensible side of the scalp did not induce any movements of the limbs, which were thrown into a cataleptic state on opening the eye; a current of air created by a pair of bellows, and directed to the scalp insensible to a pin-prick, produced movements of the limbs, with rotation and flexion of the head.

In different periods of hypnotism it is possible to limit on the surface of the scalp a certain number of 'zones reflexogènes'; irritation of these zones determines movements in different parts of the body. Some of these zones seem to correspond by their position to the motor cortical region of the brain. Different physical agents produce the same results as those of a pin-prick, such as a feeble electric current, the magnet, heat, light, and sound.

M. Charcot remarks on M. Dumontpallier's communications as follows. The facts observed are indisputably very interesting, but it is impossible to assimilate them with the phenomena I described at a meeting of the Biological Society on Jan. 7. The facts I then communicated refer to the lethargic form, accompanied by nervo-muscular superexcitability; the patient whom M. Dumontpallier shows to the Society, does not present this condition. It is true that M. Dumontpallier's patients and mine are hysterical women in a state of hypnotism; but hypnotism comprises a series of varied nervous conditions; these different conditions must be clearly limited and defined; the lethargic state differs essentially from the cataleptic—the cataleptic from that called somnambulistic. The sudden movements produced by galvanic stimulus applied to the crania of hypnotised women, when in a lethargic state, are facts which differ entirely from those related by M. Dumontpallier; he admits this difference of phenomena, but asserts that both are of a reflex order. I for the moment reserve an explanation. I do not deny that reflex action plays a part in the phenomena of neuro-muscular superexcitability; various communications made by me, some of which are published in the *Archives de Neurologie*, admit it.

W. VIGNAL.

PREYER ON THE COLOUR-SENSE AND TEMPERATURE-SENSE, WITH SPECIAL REFERENCE TO COLOUR-BLINDNESS.

PREYER combats the Young-Helmholtz theory without absolutely accepting that of Hering. Red- and green-blindness are incompatible with Young's hypothesis, and the phenomena found hitherto in unilateral colour-blindness also contradict it. The theory of Maxwell, again, which adopts blue instead of violet as the third primary colour, is unable to explain the facts of unilateral colour-blindness.

Although certainly many of the phenomena of colour-blindness are explained by Hering's theory, it fails in one part. Thus the definitions of brightness and saturation lead to a series of contradictions. The processes causing sensations of light and colour, also, cannot be considered independently of one another. In the medium grey, which, according to Hering, is composed of black and white, these are not seen. The perception of black is the sensation of retinal repose; it is not caused by a direct stimulation of retina, as grey, white, and the colours are.

According to Preyer's views, colour-perception has only two dimensions; it can vary in intensity and in quality. The greater or less intensity, or brightness of sensation, depends mainly on the amplitude of the stimulus; the quality depends on the frequency of the vibrations originating the stimulus. White, grey, and black constitute the only distinct differences in intensity; while red, yellow, green, and blue, alone constitute the different qualities of colour.

Every colour-sensation is the result of the amount of receptivity for the sensation of light, and of the quality and intensity of the sensation of light normally produced by stimulation of the nerve-endings of the retina by means of rays of light of a certain wave-length. Rays having a wave-length considerably greater than 546 millionths of a millimètre produce the sensation of a warm colour (*e. g.*, brown, red, yellowish red, yellow, yellowish green); and the rays of a wave-length considerably shorter than 546, produce the sensation of a cold colour (*e. g.*, greenish blue, green, blue, reddish blue). The spectrum, consequently, splits into a warm and a cold half. Between the two halves there are rays of medium wave-length, about 546, which correspond to the indifference-point for colour-temperature. This spot is the brightest in the spectrum, and with increased illumination is most readily converted into white. There are only two means of transition between the warm and the cold colours. The one is from the red to the blue through the yellow, the indifference-point, and the green; the other from the red to the blue directly, through the purple and violet.

The warm and cold colour-sensations differ essentially in character. Red and yellow are more nearly related than red and green; blue and green again are more nearly related than blue and yellow. The sensation of adjacent antagonistic colours is quite different from that of adjacent warm or cold colours.

According to Preyer, the colour-sense has developed from the temperature-sense, and is a temperature-sense highly differentiated and confined in its action to a highly sensitive nerve-expansion, the retina. The continually recurring series of colour-

sensations is analogous to the ever recurring temperature-sensations. The latter are dependent on sensations of contact, the former on those of brightness. Colour-blindness is produced by a displacement of the neutral point for colour-temperature, and corresponds to that imperfection of the temperature-sense which occurs when a considerable surface of skin is maintained continuously cooled or heated. Complete colour-blindness corresponds to an absence of thermal, with persistence of tactile, sensibility. R. Marcus Gunn.

MICHEL ON THE IRIS AND ON IRITIS.

J. Michel says (*Archiv für Ophthal.*, Band xxvii, No. 2, p. 171) that there is no longer any doubt that the anterior surface of the iris has an epithelioid covering. In the stroma of the iris are three kinds of cells: 1, spindle-shaped and star-shaped cells; 2, flat cells; 3, lymphoid cells. The iris is enclosed between two bounding membranes, viz., anteriorly, a delicate epithelial layer, which extends from the ciliary attachment of the iris to its pupillary border; posteriorly, a membrane composed of definite cell-elements, which carries on its hinder surface a layer of pigment. Between these two bounding membranes are two internal layers: (*a*), the reticular layer, composed of anastomosing cells, with interspersed lymph-corpuscles, not unlike the reticular structure of a lymphatic gland; and (*b*), the vascular layer, composed of trabeculæ of connective tissue, which carry vessels and nerves. These trabeculæ have a radial arrangement on the whole. On them are seen lying flat cells, either isolated or in groups. The structure of this vascular layer of the iris is not unlike 'the cavernous beam-work' which Sattler has described in the choroid of birds.

At the position of the sphincter pupillæ all the above layers are represented, but the reticular and vascular layer are much diminished in thickness. The development of the sphincter-part of the iris takes place very early in fœtal life; that of the ciliary part begins about the end of the sixth month.

The pupillary membrane is a thin lamina provided with nuclei, epithelial cells, and vessels. The iris develops behind this membrane. At the disruption of the membrane, which takes place in a peculiar manner about the seventh month, its remains constitute the epithelioid covering of the anterior surface of the iris. Early in fœtal life, there are, at the posterior surface of the iris, three layers, in the following order, from behind forwards: (*a*), pars ciliaris retinæ; (*b*), pigment-layer; (*c*), the bounding membrane. Of these, the pars ciliaris becomes pigmented, and coalesces with *b*. At no period of fœtal life are elements to be seen on any part of the posterior boundary of the iris which can be regarded as unstriped muscular fibres.

In *acute iritis* excited in rabbits by the injection of ¼ to ½ per cent. solution of nitrate of silver into the anterior chamber, there are found, microscopically, upraising of the epithelioid covering of the anterior surface of the iris by a fibro-purulent deposit beneath it, fibro-purulent masses in the anterior chamber, general swelling of the iris, extravasations, and occlusion of the pupil. After infection of rabbits with tubercle, the epithelioid covering of the iris is found raised by tubercles; there is general proliferation of the epithelioid elements of the iris, and deposition of tubercles in the ciliary processes. Human irides were examined after removal by iridectomy, with the following results.

1. In *acute purulent iritis*, there are found detachment of the epithelioid covering of the anterior surface of the iris, with laceration and curling up of this membrane; extensive fibrino-purulent effusion into the anterior and posterior chambers, in the pupillary area, and between the epithelioid and reticular layers of the iris, and extravasations into its tissue; partial plugging of the arteries by fibrinous masses (in metastatic cases, thrombi containing bacteria), general infiltration and swelling. These results correspond closely with those mentioned above, obtained in artificially excited iritis in rabbits.

2. *Chronic Inflammation of the Iris.*—Syphilitic iritis is to be regarded as primarily an endarteritis of the small vessels; there is, secondarily, formation of nodules (gummata); later, there is a general proliferation of epithelioid elements throughout the tissue of the iris. These nodules are frequently invisible to the naked eye.

In tubercular iritis, also, nodules are found. Here they are seated on the vessels at one side, not embracing them, as in the syphilitic form; they are composed of epithelioid elements, which, at the periphery of the nodule, have a concentric arrangement; near the centre, a radial one.

In leucæmic iritis there are nodules between the posterior bounding membrane of the iris and the vascular layer. They consist of lymphoid and epithelioid elements, without discernible intercellular substance. The posterior bounding membrane itself shows an increased number of oval nuclei, and a thickening of the pigment-layer; in some of the nodules, a new formation of vessels takes place. The vessels of the iris generally have their circumvascular sheaths distended with lymphoid cells.

In chronic iritis, secondary to keratitis punctata, there is a great increase of lymphoid cells in the vascular sheaths and tissues of the iris in general. The pressure upon the vessels, caused by this increased number of cells, and consequent congestion, possibly accounts for the visible vessels on the iris during life in this disease.

In cyclitis after wounds or operations, are found changes in the endothelial covering of the iris, proliferation of nuclei in, and hyaline thickening of, this membrane, and occasionally upheaving of it by extravasation. The iris is infiltrated with round cells, and there are groups of wandering cells in the neighbourhood of the vessels. The vessels show an increase in the connective tissue of the adventitia, and a proliferation of the cells of the intima. The posterior chamber is filled with granulation tissue, which extends over the pupillary arcs. The thickened vessels do not show the amyloid reaction.

In a case of 'pseudo-leukæmia', the changes were found in the reticular layer of the iris; here there were nodules composed of spindle-cells, and newly formed lymphoid and epithelioid elements.

3. In primary glaucoma are found extravasations, extreme congestion of veins, especially in the sphincter part of the iris, and a general increase of lymphoid cells in the vascular layer. Possibly this collection of cells in the sphincter part may oppose some obstacle to the action of the sphincter, and so account for its loss of function in glaucoma. [This may be compared with Dr. Brailey's observation that the inflammation in the ciliary body in the early stage of glaucoma is principally in and around

the fibres of the ciliary muscle.—*Ophth. Hosp. Rep.*, vol. x, part 2, p. 282.—*Rep.*]

4. In secondary glaucoma there are adhesion of the periphery of the iris with the cornea, thickening of the whole anterior surface of the iris, and new formation of vessels under the epithelium; the posterior bounding membrane is sometimes thrown into folds, and the pupillary margin is in a state of ectropion. This condition may be explained in the following way. From the place of adhesion of the periphery of the iris to the cornea, a centrifugal pull is exerted on the iris; this causes mydriasis, throws the iris into folds, brings about ectropion of the pupillary margin, and at the place where this ectropion takes place, tends to bring the posterior surface of the iris into contact with the anterior lens capsule, and so cause posterior synechia. This latter result will ensue all the more easily, as in some cases of increased tension, the lens is nearer the posterior surface of the iris than usual. [The author appears to imagine that the 'centrifugal pull' causes an arching of the iris with the concavity forwards, just as the contraction of scar-tissue in the skin of the eyelid causes arching of the lid and ectropion. Even if it be conceded that such a pull is exerted on the iris, it is very doubtful if it would have the arching effect here attributed to it. A large series of specimens in the Moorfields Museum, which the reporter has had the opportunity of examining by the kindness of Dr. Brailey, show no trace of any such arching.—*Rep.*]

5. In prolapse of the iris its tissues undergo the same changes as in secondary glaucoma; in extreme cases, nothing is left of the iris but a thickened epithelioid layer and pigment.

6. In congenital buphthalmos the thickness of the iris is much reduced. Its ciliary part undergoes a change of position through the adhesion of the posterior surface of the iris to the underlying ciliary processes; this causes a retraction of the periphery of the iris, and a distinct bending of the vessels.

W. H. CHARNLEY, M.D.

GALEZOWSKI AND DESPAGNET ON CLINICAL STATISTICS FOR THE YEAR ENDING JULY 1881.

DR. DESPAGNET (*Recueil d'Ophthalmol.*, Dec. 1881) gives a careful statistical and analytical account of the cases which presented themselves for treatment at Dr. Galezowski's Eye-Clinique during the year ending July 1881.

From this paper, a few of the most important observations may be selected. A good example of that rare disease, calcareous degeneration of the cornea, was met with only once, but a similar case had already been seen and described by Dr. Galezowski in 1878, and by Bowman before him. The affection is due to infiltration and calcification of the epithelium, the process being strictly limited to that layer of the cornea. Abrasion was followed by cure.

In sclerotitis, besides constitutional treatment, Dr. Galezowski strongly advocates iridectomy whenever symptoms of kerato-iritis begin to show themselves. He gives details of fifteen cases, in which very favourable results followed the operation.

In wounds of the sclerotic, the practice of placing a suture is strongly advocated. One case is mentioned in which an incised wound (11 millimètres), five lines in length in the superior half of the globe, was thus brought together with perfect success, although the vitreous humour was escaping, and the ciliary zone had evidently been wounded. Vision was restored to the extent of a quarter. In wounds, however, of the sclerotic and cornea, whether complicated with hernia of the iris or not, the above practice is condemned, having as yet, in six cases, given no satisfactory results.

In specific iritis, Dr. Galezowski strongly advocates constitutional treatment by hypodermic injection of albuminate of mercury. Within the last eighteen months he has administered nearly 2,000 injections of this salt, without a single untoward accident. This result he attributes partly to the fact of the careful manner in which his formula was dispensed (directions given), but still more to the fact that the needle was always passed deeply into the subcutaneous tissue, or even beneath the fascia, but not into the skin. He claims for this method of administering mercury in such cases, rapidity, efficacy, and less constitutional disturbance than by any other with which he is acquainted. He records three cases of gonorrhœal iritis. One occurred in a youth who, at the same time, was suffering from gonorrhœal rheumatism of the knee of the opposite side. Dr. Galezowski believes that in this case the iritis was essentially of rheumatic origin, and was more acute and intense, because the rheumatism was specific. He also mentions a case of spontaneous mydriasis, traced to reflex irritation from a carious tooth.

In the *Recueil d'Ophth.* for March 1882, Dr. Despagnet calls attention to a new form of eye-speculum. It is much of the same size and shape as Von Gräfe's, but has a hinge in the centre of either branch which enables the portion projecting beyond the orbit to be laid back on the temple, out of the operator's way.

In trichiasis, Dr. Galezowski, we learn, makes very extensive use of the thermo-cautery. He applies this, at intervals, along the base of the lashes. According to the depth at which the heat is applied the resulting eversion can be increased or diminished.

In the treatment of 'organic entropion', complicated with blepharophimosis, both lids being involved, his routine practice is to enlarge the palpebral opening; where, however, only one lid is engaged, he adopts a different method. In these latter cases he makes a more or less deep cauterisation at the distance of about 3 millimètres from the palpebral margin. The eschars, as they contract, seldom fail to replace the margin in its proper position.

In ectropion, he has largely adopted Verneuil's operation of blepharoraphy, and allows the lids to remain sewn together for six, ten, or twelve months, until all tendency to contract has ceased. For sutures, Dr. Galezowski prefers very fine gold wire to any other material.

For the treatment of old standing granulation, excision of the conjunctival *cul-de-sac* is recommended.

One case of xerosis, in which, also, the lower lid was adherent to the globe, was cured by a graft of conjunctiva from a rabbit. The flap transplanted measured 15 millimètres each way, and was attached by four superficial sutures and two deep ones. Since the operation, the new conjunctiva secretes sufficient moisture to render all the movements of the globe easy and painless.

Out of eight cases of tenotomy for divergent strabismus, Dr. Galezowski has, in seven, performed advancement of the internal rectus, in preference to division of the externus. In tenotomy of the inter-

nus for convergent strabismus he recommends that the conjunctival wound should always be horizontal instead of vertical, to avoid the effects of cicatricial contraction. He also advocates dividing the muscle itself as it passes over the hook, instead of merely dividing its aponeurotic attachments. He alleges that, by this means, he obtains greater effect, while at the same time he has had no reason to fear any complete retraction of the muscle. He cites several cases, some of which have been more than a year under observation, in support of his proposition.

As to the operation of sclerotomy, Dr. Galezowski would limit its application entirely to cases of simple and hæmorrhagic glaucoma. He figures a sclerotome with bent blade and double edge, with which, instead of one long section, he makes four in the form of a cross. The object of this is to avoid as far as possible hernia of the iris, with consequent incarceration in the wound. Optico-ciliary neurotomy he condemns very strongly, having in three cases in which he tried it obtained bad results.

Dr. Galezowski enters at considerable length into the subject of the intraocular division of synechiæ, an operation to which he gives the name of 'synechotomy'. He recommends it (1) in cases where anterior synechiæ, caused by wounds and limited in extent, exist; (2) in anterior synechiæ following an operation for conical cornea; and (3) in the case of a partial staphyloma adherent to the cornea, and due to perforation of that membrane. He uses, as a rule, a curved knife made for the purpose, but makes no mention either of Streatfeild's operation, or of the spatula recommended by that surgeon.

The article closes with statistics of two hundred and fifty-two cataract operations. From these we learn that Dr. Galezowski has abandoned his previous practice of downward sections of the cornea, making them always now, except under peculiar circumstances, upwards. Litton Forbes.

BARDELEBEN ON POPLITEAL ANEURISM.

Professsor Bardeleben reports, in the *Berl. Klin. Woch.*, No. 1. 1882, a case of popliteal aneurism, and adds some remarks of interest on the treatment of the affection, which seems to be of much less frequent occurrence in Prussia than in this country. The subject of this case was a working tailor, aged 46, who complained, for the first time, of pain and stiffness behind the right knee, in May 1880. One month later, he noticed pulsation in this region, and four months later observed a distinct tumour. At the end of the year he came, as a hospital patient, under the care of Professor Bardeleben. There was then seen in the right popliteal space an elastic pulsating tumour of the size of a man's fist, which diminished in size and ceased pulsating on compression of the femoral artery. No history of injury could be made out. The patient seemed to have been quite free from syphilitic disease and from rheumatism; the heart was clearly quite normal, and no indications of vascular disease were presented by the radial, temporal, or posterior tibial arteries. The tumour was attributed by the man himself to his habit of always standing when at work.

In the treatment of this case, the affected limb was first fully flexed at the hip and knee, and occasional digital compression was applied to the femoral artery. This plan was kept up for four days, during most of which period the pulsation in the aneurism was arrested, but had to be discontinued in consequence of much œdema in the foot and leg, and also of sloughing over the heel. The next attempt consisted in applying instrumental compression to the femoral artery. The vessel was readily controlled by pressure of this kind without any complaint from the patient of pain or even uneasiness, but in the course of twenty-four hours gave rise to sloughing of the skin. This result followed the application of a tourniquet first below Poupart's ligament, secondly, above this ligament, and again in the middle third of the thigh. A subsequent attempt to treat the aneurism by the application of an elastic bandage to the limb, and of Esmarch's ligature above the knee, caused much pain, and was followed by sloughing of the skin over the instep, and also by a sudden attack of peculiar mental and nervous disturbance, in which the patient attempted to commit suicide. As it was found that pressure invariably caused sloughing, and as no progress had hitherto been made towards cure of the aneurism, Professor Bardeleben decided on applying a ligature to the femoral artery on Scarpa's triangle. The material employed for this ligature was carbolised catgut, and the operation was performed under strict antiseptic conditions. The wound was dressed antiseptically, and, notwithstanding the proximity of the sloughing sores that had been caused by compression, it healed in the course of eleven days, without the discharge of a single drop of pus. The patient made a speedy recovery, without fever or any other bad symptom; and, although on the third day a large pulsating vessel was observed on the inner side of the knee, and the temperature of the limb during the first two days after the operation did not fall, but rather increased, the aneurismal tumour became hard and small, and soon disappeared, without any return of pulsation. It was noticed, very soon after the application of the ligature, that, whilst the inner side of the thigh had become anæsthetic, the outer side preserved its sensibility. This, Professor Bardeleben thinks, was probably due to the fact that the arterial supply of the outer part of the thigh is derived from the profunda.

In some remarks on this case, Professor Bardeleben states that there was, without doubt, a peculiar tendency in the patient's skin to become gangrenous on the application of even slight pressure. The man did not suffer from diabetes, but the fact of a few small doses of iodide of potassium, administered at an early stage of the treatment, having suddenly caused an eruption over the whole surface of the body, indicated some abnormal condition of the skin. Such condition, as shown by the sudden dilatation of the small cutaneous vessels through the action of an internal irritant, might, it is suggested, have been the origin of the impairment and loss of vitality in the skin, caused by such pressure as would not have had such bad results if applied to the skin of other subjects. In discussing the rival claims of deligation and external compression in the treatment of popliteal aneurism, Professor Bardeleben gives it as his opinion that, though the risks attending the cutting operation may be much reduced by carrying out Lister's antiseptic method, it is better to have recourse to that plan of treatment, which, from its not necessitating any division of skin, is of an antiseptic character. Compression, however, ought not to be carried too far in unfavourable cases; and, when it is clear that the affected limb will not tolerate such treatment, the surgeon should at once resort to antiseptic deligation. W. Johnson Smith.

BECK ON THE DIAGNOSIS OF INJURIES OF THE ABDOMEN.

IN a communication by Dr. B. Beck on cases of injury to the intestines, liver, and bladder (*Deutsche Zeitsch. fur Chir.*, Band xv; *Med.-Chir. Runds.*, 1882, p. 112), it is stated that a prompt and decided diagnosis as to rupture of an internal organ in cases of a blow on the abdomen is attended with extreme difficulty, since there is not any one characteristic symptom of such lesion, and it is only through careful observation and study of all the symptoms that a correct conclusion can be attained. Of the general symptoms, a high degree of shock, which condition is rarely absent in cases of severe abdominal concussion, indicates laceration of an internal organ. Intense and persistent collapse, associated with a thready and very rapid pulse, and shallow and quick breathing, will remove any doubt as to the occurrence of internal bleeding. Whilst with simple abdominal contusion, febrile phenomena are seldom observed, a high and increasing temperature, together with increase of the pulse and respiratory movements, would indicate peritonitis from effusion of intestinal contents. Of the local symptoms, the most important is that of pain, which is localised, spontaneous, and but slightly affected by pressure. This pain steadily increases in severity until the stage of intestinal paralysis, when it ceases. In cases of contusion, on the other hand, the pain is not so acute; it is increased by pressure, varies in intensity at different times, and often ceases suddenly. The physical abdominal symptoms, as swelling, distension, resistance, and the changes in percussion-sounds, have not, Dr. Beck holds, the diagnostic value that have been claimed for them by Dr. Moritz (*St. Petersburger Med. Woch.*, 1879). Sudden tympanites, with a clear sound over the hepatic region, is not likely, in Dr. Beck's opinion, to occur with rupture of the intestine, unless this rupture be very extensive. In ordinary cases, the intestinal gas escapes into the abdominal cavity so gradually, and in such small quantities, that it could not give rise to any sudden and marked external signs. On the other hand, in some cases of abdominal contusion without rupture of intestine, Dr. Beck has made out a clear percussion-sound over the region of the liver, this condition having been due to paralysis of a small portion of intestine, and to accumulation above this paralysed portion of a considerable quantity of gas.

The later local symptoms observed in cases of intestinal rupture are usually but the results of the peritonitis due to escape of poisonous gas. Immobility of the patient and dread of being disturbed are not, it is stated by Dr. Beck, characteristic symptoms of ruptured intestine. In almost every case of abdominal injury, the patient at first remains at absolute rest; but, in advanced stages, in cases of rupture, and after peritonitis has spread extensively, the patient, suffering from pain and the distension of tympanites, endeavours to allay his intolerable condition by frequent changes of position. Much importance is to be attributed to vomiting, which, in cases of slight abdominal injury, soon ceases after the disappearance of the symptoms of shock. In cases, on the other hand, of communication between the intestinal canal and the peritoneal sac, vomiting steadily increases, and the patient is much troubled by frequent and profuse ejections of bilious fluid. Retention of urine and difficulty in micturition are to be regarded as symptoms of some value. Neither of these is likely to be observed in cases of slight abdominal injury; but the use of the catheter is often required when peritonitis has resulted from rupture of the intestine, or of some other internal organ. The following conditions indicate with certainty the occurrence of rupture of the bladder: intense pain in the region of the bladder, anuria, signs of the presence of free fluid in the peritoneal sac, swelling and distension of the abdomen, purulent peritonitis, which, however, does not run so rapid a course as that due to rupture of intestine, pelvic infiltration, and a small quantity of urine in the bladder, and this mixed with fluid or coagulated blood. The extent and severity of this collection of symptoms varies in different cases, according to the seat of the vesical rupture.

In discussing the treatment of abdominal injury from direct violence, particularly from a kick, Dr. Beck points out that it is advisable, in cases of doubt, to take the most unfavourable view of the case, and to treat the patient in accordance with such view, by insisting on absolute rest, by applying leeches and cold compresses to the abdomen, and by administering opium internally, or, when there is obstinate vomiting, by giving subcutaneous injections of morphia. The patient should occasionally suck small lumps of ice, and be restricted to cold and fluid nourishment. By no means should any clyster be administered, lest, by such treatment, active movements of the injured intestine be excited.

It has been proved, on *post mortem* examination, that, under such treatment as this, sealing together of the margins of the intestinal rent by fibrinous exudation and even firm occlusion may result; but, in such cases, when but even a very small quantity of intestinal contents has been effused, this treatment rarely results in cure. Operative interference, in cases of intestinal rupture, ought, in Dr. Beck's opinion, not to be considered; as in many of these cases the rupture is inaccessible through its deep situation, and through the glueing together of the intestinal loops by the products of recent peritonitis.

W. JOHNSON SMITH.

VULPIAN ON PARALYSIS THROUGH COMPRESSION OF NERVES.

PROF. VULPIAN has recently communicated to the Academy of Medicine of France (*Bulletin*, No. 10, 1882) the following case of paralysis of the upper extremity after the use of crutches. The patient was a woman who, in consequence of chronic disease of the right knee, had been compelled to use crutches. A few days before her admission into the Hôtel Dieu, the handles of the crutches became uncovered, so that the skin of the armpits and the brachial nerves were compressed by bare and hard wood. The patient soon complained of pain in the forearms and hands; the backs of the wrist and fingers swelled, and, at the same time, the superior limbs became extremely weak. When the patient was first seen by M. Vulpian the forearms and hands were paralysed. At the end of twenty-four hours the swelling had disappeared, and the patient no longer complained of pain, but the paralysis still persisted.

In his comments on this case, M. Vulpian states that the pressure of the crutches had acted on all the brachial nerves. This is not invariably the result of such pressure. Sometimes but one nerve is affected, and the paralysis is observed only in the

muscles supplied by this nerve. The paralysis was much more complete and marked in the right extremity than in the left. There was only paralysis of mobility; the sensibility remained intact and the vaso-motor nerves retained their functions. The muscles of the right forearm and hand, the side most paralysed, preserved their contractility in almost a normal degree. The nerves, however, did not exert any contractile action on the muscles. Faradisation of the musculo-spiral nerve, for instance, was not followed by any contraction of the common extensor muscle, although when applied over the muscle itself it caused strong movements. This condition was analogous to that of the muscles and nerves of a frog poisoned by curare. In complete paralysis thus caused in this animal the muscles remain contractile, whilst the nerves, whether submitted to galvanic or faradic currents, do not execute the least muscular contraction. This is not the constant condition in paralysis through the use of crutches. If the nerves have been so forcibly compressed as to undergo structural change, the muscles soon fail to respond, or, at least, respond but feebly, to faradic stimulation, but continue, on the contrary, to contract under the influence of galvanic currents. In short, one may observe the particular characteristics of morbid change in the motor nerves. In such cases, the affected muscles speedily undergo atrophy.

In this case, M. Vulpian states, it is difficult to admit, that the motor fibres of a large nerve, the musculo-spiral, for instance, could be affected by the pressure of a crutch-handle, whilst the sensory, vaso-motor, and secretory nerve-fibres, mixed with motor fibres in this nerve-trunk, had escaped pressure. If the motor nerve-fibres be paralysed, and not the other fibres, this result must then be due to some modification existing at the intramuscular terminations of these fibres, a modification which, as has already been mentioned, may be compared to the result produced by curare at points where the ends of the motor fibres come into relation with the proper substance of the striated muscular bundles. In this patient, when some improvement had been derived from daily electrisation, although faradic stimulation of the musculo-spiral nerve readily excited muscular contractions, but very feeble contractions could be effected by the will in the muscles supplied by this nerve. It is thought probable that, in other cases of paralysis through the use of crutches, there may be, for some days at least, an absence of voluntary movements, whilst it is possible to excite contractions by direct faradisation of the nerves. M. Vulpian states that the conditions noted in this case were similar to those of the so-called paralysis *a frigore*, and he alludes to the opinion expressed in 1871 by M. Panas that most of the cases of paralysis *a frigore* are cases of paralysis by compression. Having observed this case, in which the paralysis, evidently produced through the pressure of corticles on the musculo-spiral nerves, resembled the phenomena of the so-called paralysis *a frigore*, M. Vulpian agrees in the opinion of M. Panas. It is pointed out that in many of the latter cases the musculo-spiral nerve had been subjected to continuous compression, and that frequently the paralysis had been produced without any decided intervention of cold. In a brief summary of his paper, M. Vulpian states that prolonged compression of a nerve may produce paralysis of this nerve, characterised by a temporary interruption of the transmission of stimuli through the motor nerve-fibres to striated muscular bundles, whilst both these anatomical elements retain their physiological properties.

W. Johnson Smith.

RIBBERT ON THE INFLUENCE OF TANNIC ACID ON ALBUMINURIA.

Dr. H. Ribbert (*Centralb. für die Med. Wiss.*, 1882, No. 3; *Pester Med. Chir. Presse*, No. 8) having produced albuminuria in rabbits by means of ligature, injected a 0.5 per cent. solution of tannic acid into the jugular veins. The kidneys were subsequently removed and examined, both in the recent state and after having been subjected to boiling. A marked diminution in the quantity of coagulated fibrin in the Malpighian capsules was observed, in comparison with other kidneys not previously acted upon by tannic acid. A similar experiment with 25 cubic centimètres of a 2 per cent. solution of tannate of soda was made, in confirmation of Lewin's investigations on the action of the salt, and it was found that in most of the glomeruli the albumen was completely absent, and in others only a very narrow ring was present, and in a few a somewhat broader zone. From these experiments it would appear that albuminuria of traumatic origin may be lessened, or actually prevented, by the action of tannin, and a distinct experimental support is given to Frerichs's application of tannic acid in nephritis. Dr. Ribbert thinks, therefore, that the treatment of nephritis with tannin should be perseveringly tried, especially with tannate of soda, and this in far larger doses than have ever been given of the acid. Experience must teach to what extent these doses may be pushed. Anatomical considerations lead clearly to the indication that the drug is most likely to succeed in cases of commencing nephritis, if, as Dr. Ribbert has made out, all forms of nephritis commence in the glomeruli. He suggests that, besides lessening the transudation of albumen, the tannic acid may perhaps also influence the epithelial desquamation about the glomerulus.

If parenchymatous or interstitial nephritis have become established, there is little to hope from the drug, unless the opinion be held that the loss of albumen, by its weakening effect upon the general organisation, of itself serves to keep up the renal affection.

The treatment must be kept up for a considerable time. The average quantity of albumen thrown off in inflammation of the human kidney, judging by the breadth of the zone obtained by boiling or hardening, is by no means so considerable as that found in the rabbit's kidney half an hour after the removal of the ligaturing forceps, and the almost complete success of injection of tannate of soda, in the latter case, leads to the belief that the use of the drug in human nephritis would be attended by still more satisfactory results.

E. Clifford Beale, M.B.

THE MAXIMUM DOSES IN THE NEW GERMAN *PHARMACOPŒIA*.

The new draft of the table of maximum doses of the German *Pharmacopœia* is reviewed by Professor Eulenburg in the *Berl. Klin. Woch.*, 1882, No. 6. The doses are given in grammes, and decimal parts of grammes.

	Maximum Single Dose.	Maximum Daily Dose.
Acetum Digitalis	2.0	10.0
,, Scillæ	2.0	10.0
Acidum arsenicosum	0.005	0.02
,, carbolicum cryst. ..	0.1	0.5
Apomorphinum hydrochl. ...	0 01	0.02
Aqua amygd. amarum ...	2.0	8.0
Argentum nitricum	0.03	0.2
Atropinum sulfuricum ..	0.001	0.003
Auro-Natrium chloratum ...	0.05	0.2
Bulbus Scillæ	0.2	1.0
Cantharides	0.05	0.15
Chloralum hydratum	3.0	6.0
Codeinum	0.05	0.2
Coffeinum	0.2	0.6
Cupr. sulf. pro emetico ...	1.0	—
Extractum Aconiti	0 02	0.1
,, Belladonnæ ...	0.05	0.2
,, Cannabis Indicæ ...	0.1	0.6
,, Colocynthidis ...	0.05	0.2
,, Hyoscyami ...	0.2	1.0
,, Opii	0.15	0.5
,, Scillæ	0.2	0.8
,, Secalis cornuti ...	0.2	1.0
,, Strychni spirit. ...	0.05	0.15
Folia Belladonnæ	0.2	0.6
,, Digitalis	0.2	1.0
,, Hyoscyami ...	0.3	1.5
,, Jaborandi	0.5	10.0
,, Stramonii	0.2	1.0
Gutti	0.3	1.0
Hydrargyr. bichlor. corros. ...	0.03	0.1
,, bijodat. rubr. ...	0.03	0.1
,, jodat. flavum ...	0.05	0.2
,, oxydat. rubrum ...	0.03	0.1
,, ,, v. h. par. ...	0.03	0.1
Iodoformium	0.2	1.0
Iodum	0.05	0.2
Kali chloricum	2.0	10.0
Kossinum	?	?
Kreasotum	0.05	0.2
Lactucarium	0.3	1.0
Liquor Kali arsenicosi ...	0.5	2.0
Morphium hydrochlor. ...	0.03	0.1
,, sulfuricum ...	0.03	0.1
Oleum Crotonis	0.05	0.1
Opium	0.15	0.5
Phosphorus	0.001	0.003
Physostigminum salicylic. ...	?	?
Pilocarpinum hydrochlor. ...	0.03	0.06
Plumbum aceticum	0.1	0.3
Santoninum	0.1	0.3
Secale cornutum	1.0	5.0
Semen Strychni	0.1	0.2
Strychnium nitratum	0.01	0.02
Summitates Sabinæ	1.0	2.0
Tartarus stibiatus	0.2	0.5
Thymolum	0.1	0.5
Tinctura Aconiti	0.5	2.0
,, Cantharidum ...	0.5	1.5
,, Colchici	2.0	6.0
,, Digitalis	2.6	6.0
,, Iodi	0.2	1.0
,, Lobeliæ	1.0	5.0
,, Opii crocata ...	1.5	5.0
,, ,, simplex ...	1.5	5.0
,, Scillæ	2.0	6.0
,, Strychni	1.0	2.0
Tubera Aconiti	0.1	0.5
Veratrinum	0.005	0.02
Vinum Colchici	2.0	6.0
Zincum sulfuric. pro emet. ...	1.0	—

The new table contains the following preparations which were wanting in the old one: 1, Acetum Digitalis; 2, Acetum Scillæ (for both of these frequently used drugs the determination of a maximum dose seemed appropriate); 3, Apomorphinum hydrochloratum, (now accepted in the *Pharmacopœia*); 4, Bulbus Scillæ (a maximum dose was considered appropriate); 5, Chloralum hydratum (likewise); 6, Caffeinum (likewise); 7, Extractum Scillæ; 8, Extractum Secalis cornuti (likewise); 9, Folia Jaborandi (accepted now for the first time); 10, Hydrargyrum oxydatum v. h. par. (the addition seemed justified for the sake of completeness); 11, Iodoformium (a maximum dose appeared advisable); 12, Iodum (likewise); 13, Kali chloricum (likewise, especially with regard to several poisoning cases lately recorded); 14, Kossinum (now first accepted); 15, Physostigminum salicylicum (likewise); 16, Pilocarpinum hydrochloricum (likewise); 17, Secale cornutum (maximum dose was thought appropriate); 18, Summitates Sabinæ (likewise); 19, Thymolum (now first accepted); 20, Tinctura Lobeliæ; 21, Tinctura Scillæ (a maximum dose seemed appropriate for both the older remedies).

On the whole, in spite of many new additions, the number of the remedies arranged in the table of maximum doses is diminished by 15, a change which will certainly meet with the approval of students preparing for the State examination.

With a few exceptions, the alterations made in the dosage are inconsiderable. They consist, for the most part, in simplifying the expression of the decimal weights, and in the immediate translation of the medicinal weights of the former plan to the gramme standard; *e.g.*, 0.05 now generally replaces 0.06, and 1.0 stands for 1.2. There is further a gradual introduction of a greater congruity between the single dose and the daily dose, or between the different preparations containing one and the same active principle.

The settlement of a maximum dose for the recently introduced remedies 'Kossinum' and 'Physostigminum salicylicum' has been reserved for final determination.

The *Pharmacopœia* Commission likewise reserved to themselves to decide hereafter whether—as was proposed by one of the members—the highest doses in the table should not be expressed in words as well as in figures.

The Commission considered that they ought to decline the proposition, made by several physicians, medical societies, etc., to draw up special tables of maximum doses for children, and also for hypodermic injections. The reasons for this decision were the following. The establishment of a table of maximum doses for children in general appeared most difficult; it would have been necessary to distinguish the various periods of childhood; and, again, to render possible the control of the maximum dose ordered, the additional duty would fall upon the physician of stating his patient's age on each prescription. A table of maximum doses for hypodermic injections was also disregarded, although, from certain points of view, it might appear appropriate; because such a table might then, with equal justice, be demanded for all other external applications, injections, inhalations, etc.; and because, further, in the ordinary method of ordering solutions for hypodermic injection, the strength of the individual dose used each time is, as a rule, altogether disregarded.

E. CLIFFORD BEALE, M.B.

THERAPEUTICS AND PHARMACOLOGY.

RECENT PAPERS.

1. Salter.—Acute Traumatic Tetanus successfully treated by Chloral and Bromide of Potassium. (*Practitioner*, Feb. 1882, p. 99.)

2. Green.—Nitro-Glycerine in Heart-Disease. (*Ibid.*, p. 103.)

3. Fenwick.—The Salicylates and their Use. (*Lancet*, Feb. 1882, p. 216.)

4. Spencer.—Nutrient Suppositories. (*Practitioner*, Feb. 1882, p. 112.)

5. Harries.—Boracic Acid applied locally in Diphtheria. (*Lancet*, Feb. 1882, p. 306.)

6. Blake.—Relation of Physiological Action with the Atomic Weights of the Elements. (*Chemical News*, 1882, p. 111.)

7. Edson.—Hydrangea in Renal Calculus. (*New York Med. Record*, Dec. 10, 1882.)

8. Kenner.—A Solvent for Sulphate of Quinine. (*Louisville Med. Times.*)

9. Van Oye.—Antithermic and Apyretic Effects of Phenic Acid in Typhoid Fever. (*Paris Méd.*, Nov. 19, 1881.)

10. Treatment of Puerperal Convulsions by Pilocarpine. —(*Jour. de Méd. de Bruxelles*, Oct. 1881.)

11. Sena.—Bread prepared with Sea-Water. (*New York Med. Rec.*, Feb. 4.)

12. Gallico.—Chronic Dysentery Treated by Injections. (*Gaz. Med. Ital. Prov. Ven.*, Dec. 31, 1881.)

13. Grocco.—The Action of Pilocarpine. (*Gaz. Med. Ital. Lombardia*, Feb. 25, 1882.)

14. Schæfer.—On a more Active Form of Ergot. (*Bert. Klin. Woch.*, 1881, No. 21.)

15. Rohrer.—On Coto-bark. (*Corresp. für Schweizer. Aerzte*, No. 22, 1881.)

16. Rivet.—Some Additional Effects of Sulphate of Quinine. (*L'Union Méd.*, Nov. 1, 1881.)

17. Brieger.—The Therapeutic Value of the newly recommended Drugs, Resorcine and Chinoline. (*Deutsche Med. Zeitung*, Feb. 2, 1882.)

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1. *Salter on Acute Traumatic Tetanus Successfully Treated by Chloral and Bromide of Potassium.*—Mr. J. H. Salter contributes, in the *Practitioner*, Feb. 1882, p. 99, another to the long series of cases of this disease that have yielded while under treatment with the two drugs named. In twenty-six days, sixty drachms of chloral and eighty drachms of bromide of potassium were consumed. [A reference to Sections 1327 and 1328 of the *Medical Digest* will show how valuable this mode of treatment had proved in many hands up to the end of 1876, and during the last five years a large amount of corroborative evidence has been accumulated.—*Rep.*]

2. *Green on Nitro-Glycerine in Heart-Disease.*—Mr. W. E. Green (*Practitioner*, Feb. 1882, p. 103) testifies to the vast value of this drug in many cases of cardiac disturbance. Its value in angina pectoris was noticed in the London Medical Record, 1881, p. 409. In weak dilated and fatty hearts, Mr. Green finds it also of great value, relieving arterial tension, and thus lessening the amount of work the heart has to do. In a case of abdominal dropsy, due to portal obstruction, the nitro-glycerine quickly effected a vast improvement. Mr. Green believes that he may claim for the drug a far wider field of usefulness than that already accorded to it.

3. *Fenwick on the Salicylates and their Use in Rheumatism.*—Dr. Bedford Fenwick adduces, in the *Lancet*, Feb. 1882, p. 216, the fact that, as the sulphocyanides in excess exist in the saliva in all cases of acute and chronic rheumatism, and as the salicylates do not diminish the quantity of these sulphocyanides, therefore salicylates are not antidotes to the rheumatic person, although they are most valuable if given in scruple doses, every hour, for six doses, and then suspended altogether. Twelve hours after ceasing the salicylates, half-drachm doses of citrate of potash, every six or eight hours, will effectually prevent relapse, if given until the saliva is alkaline. Dr. Fenwick's observations enable him to assert positively that heart-complaints are less frequent under the above plan of treatment, and also that eggs, as articles of diet, are peculiarly obnoxious to rheumatic patients.

4. *Spencer on Nutrient Suppositories.*—In the *Practitioner*, Feb. 1882, p. 112, Mr. Spencer details the mode of preparing these valuable aids in rectal nutrition, and which may be obtained from Messrs. Slinger of York. Several observers have put their value to the test, and can testify that it is real.

5. *Harries on Boracic Acid Applied Locally in Diphtheria.*—Mr. T. D. Harries adds another to the already long list of specifics for local application in this disease. In the *Lancet*, Feb. 1882, p. 306, he states that a solution of boracic acid, two drachms to the ounce of a mixture of equal parts of glycerine and water, freely applied to the diseased parts, is a most certain and speedy cure. R. Neale, M.D.

6. *Blake on the Relations of Physiological Action with the Atomic Weights of the Elements.*—Dr. James Blake of California reverts to this subject (*Chemical News*, 1882, p. 111). In a paper read before the Royal Society in 1840, he endeavoured to show that the physiological action of inorganic substances, when introduced directly into the blood of living animals, was determined by their isomorphous relations, all the substances in the same isomorphous group causing analogous physiological actions. In 1870, in a paper read before the California Academy of Sciences, he showed that, amongst the compounds of the more purely metallic elements in the same isomorphous group, the intensity of physiological action was determined by the atomic weight; the higher the atomic weight of an element in the different isomorphous groups, the smaller the quantity required to cause the same amount of physiological action. These facts Dr. Blake now applies to determine the atomic weight of beryllium, a metal, the true position of which among the elements is a matter of dispute. The result is that beryllium is assigned to the aluminium, and not to the magnesium, group of metals. The intensity of physiological action of the salts of beryllium is in accordance with its atomic weight as a member of the former group of metals. In operating upon rabbits, 23 milligrammes of the sulphate is the quantity per kilogramme of body-weight required to ensure a fatal result, or 0.16 grain per pound.

T. Stevenson, M.D.

7. *Edson on Hydrangea in Renal Calculus.*—Dr. B. Edson of Brooklyn (*New York Med. Record*, Dec. 10, 1881) alleges that he has obtained very good results from the use of drachm doses of the fluid extract of hydrangea arborescens in renal calculus, under which name a very good case of what is commonly called gravel is described. What the *rationale* of this action of the drug is, Dr. Edson does not profess to explain. He cites several additional cases from his own observation and that of others. The drug would certainly seem to merit trial in renal colic and allied affections.

8. *Keuner on a Solvent for Quinine Sulphate.*—Dr. Keuner writes (*Louisville Med. News*) that he was called to see a patient ill of remittent fever, who could not take pills or swallow quinine unless it were given in solution. To an ounce of sweet spirit of nitre he added twenty grains of sulphate of quinine, and found that he had discovered a perfect solvent for the quinine. He uses the spirit of nitre whenever he wants a solvent, since it makes a beautiful solution, and appears to counteract, in some measure, the nausea which is often troublesome in fevers. To counteract nausea and headache in fevers, however, he relies chiefly on the potassium bromide. He generally leaves about two drachms, directing the nurse to put it in a glass of water, and allows the patient to drink small quantities through the day, especially after each dose of the quinine. He has found this to relieve patients to a considerable extent, if not altogether, of sick stomach, ringing in the ears, etc.

9. *Van Oye on the Antithermic and Apyretic Effects of Carbolic Acid in Typhoid Fever.*—In 1880, M. Desplats of Lille published a series of observations on this question. Dr. Van Oye has now published a thesis, of which the following are the conclusions (*Paris Méd.*, Nov. 19, 1881, p. 293). 1. Carbolic acid is a poison to the nervous system, and possesses in a high degree the property of lowering the temperature of man and the higher animals. 2. Doses of carbolic acid that have no appreciable action on the normal temperature suffice to lower the febrile temperature. 3. This lowering is produced in febrile patients, both in simple inflammation and in infectious pyrexia. 4. It commences a few moments after taking the medicine; its extent varies according to the dose, from 1 to 3 deg. Cent. (1.8 to 5.4 deg. Fahr.); its duration, from one to three hours. 5. Its probable mechanism is the loss of caloric resulting from cutaneous hyperæmia, and more or less abundant sweating, coinciding with its production. 6. Rigor and all the phenomena of the febrile attack occur, when the antipyretic action of the preceding dose is exhausted; at the same time, the temperature rises again rapidly to its former level, or beyond it. 7. A fresh dose may interrupt this attack, and even prevent it when administered in time. 8. The doses sufficient to produce the whole utility of the antipyretic effect do not exert any injurious toxic action on the fever-patient. 9. Fifty centigrammes administered by the rectum are sufficient in all cases at the outset; generally, the dose may be progressively increased to 2 grammes, or 12 grammes in the day. 10. One gramme at the outset has been sufficient, in certain subjects with special susceptibility, to produce a depression of temperature as low as 34.5 deg. Cent. (94.1 deg. Fahr.) This considerable depression has not had in any case any injurious effect upon the patient. 11. Pulmonary congestion is a danger to be feared and avoided. 12. Albuminuria, polyuria, and perhaps fatty degeneration, are possible effects of large doses long continued. 13. The antipyretic effects of phenic acid should be reserved for the purpose of combating the excessive temperature in continued fevers, and attacks of intermittent fevers.

10. *Treatment of Puerperal Convulsions by Pilocarpine.*—Pilocarpine is employed in the Maternity Hospital of Brussels in the treatment of eclampsia, as well as in premature labour. The following are the results obtained (*Jour. de Méd. de Bruxelles*, Oct. 1881, p. 315). Hydrochlorate of pilocarpine injected subcutaneously in doses of 1, 1½, or 2 centigrammes (.15 to .30 grains), is generally borne well by the patients; they do not manifest any repugnance to the repetition of the doses, even at close intervals. The uterus is manifestly influenced a few moments after the injection, even when there is no anterior contraction. This substance does not act in the same degree in all subjects, nor in the same person in its various applications. The uterine contraction is reproduced a certain number of times, and then is relaxed; pilocarpine aids the mechanical means which tend to advance labour. It has a remarkable power in attacks of eclampsia, especially in subjects suffering from generalised œdema. When there exists a profound coma, prolonged during the whole interval of the attack, much more prompt return is obtained of the intellectual faculties than obtained by the other means employed for this purpose. So long as the bag of waters is intact, the fœtus does not appear to feel the effects of the remedy.

11. *Senation Bread Prepared with Sea-Water.*—Dr. Sena has carefully studied the internal administration of sea-water, and asserts its efficacy in scrofula and other conditions of malnutrition, and its utility as a preservative in many other maladies difficult to combat. In order to avoid the objections to administering sea-water as such, it is used in the preparation of bread, which is preferable to the ordinary article, is less insipid, and may be kept longer. All the properties of the chlorides and iodides combine to make it at once a hygienic food and a therapeutical agent. The statistical data cited by the author (*New York Med. Record*, Feb. 4) show the results obtained in the Misericordia Hospital at Valencia, one of the finest charitable establishments in Spain, where this bread has been adopted. Comparing the number of patients cured after this bread had been made use of, with the number cured the year before, a considerable increase is noticed. Dr. Sena concludes as follows. 1. Bread prepared with sea-water is exceedingly useful in the prevention and cure of scrofula. 2. It possesses the same virtues as the liquid in corresponding doses. 3. It should be used by all charitable institutions near the coast. 4. Bakers in towns so situated should prepare it as a hygienic article of diet.

12. *Gallico on Chronic Dysentery Treated Successfully by Injections.*—Dr. Gallico (*Gaz. Med. Prov. Venete*, Dec. 31, 1881) relates the case of a man, aged 34, who had for some time been under treatment for chronic dysentery by the usual remedies, but without avail. All medicines were then discontinued, and injections *per rectum* of tannic acid and laudanum substituted. The strength of the injections varied from 15 to 30 grains of tannic acid, and about 6 minims of laudanum to the pint of water. This treatment was continued for six weeks, with intervals. The improvement in the patient's symptoms at once became marked. The above injections were subsequently followed by others containing 3 per cent. of perchloride of iron, in order to continue the astringent action. The result was complete cure after about six weeks of the above treatment.

13. *Grocco on the Action of Pilocarpine.*—Dr. P. Grocco (*Gaz. Med. Ital. Lombardia*, Feb. 25, 1882) calls attention to the power which pilocarpine apparently possesses of restoring sensibility in certain cases of hemianæsthesia. The author claims from his experiments to have established that the same powers which Dr. Burq showed to reside in certain metals resides also in certain alkaloids. The first case experimented on was in a male patient, aged 28, who was suffering from anæsthesia, with paræsthesia,

probably of malarial origin, round the knee-joint. Sensibility was restored to the part within ten minutes by a hypodermic injection of pilocarpine of about one-sixth of a grain. In the second experiment, on a young girl, sensibility was observed to return gradually, and pass from one arm to the other, much as it does after the application of certain metals. In this case the alkaloids, morphia, strychnia, and atropia, when similarly applied, gave negative results. The third and fourth experiments were essentially of the same nature. In the fifth experiment morphia and pilocarpine were placed at two points distant from each other on the same limb, and the return of sensibility was watched for. On several occasions the author was able to show that this return was for the moment checked as soon as the sensibility reached the spot on which the morphia lay. From these and other experiments, Dr. Grocco concludes that pilocarpine can affect sensibility under certain conditions as metals can; that is, either when injected subcutaneously or simply when laid on the surface. LITTON FORBES.

14. *Schaefer on a more active form of Ergot.*—Dr. S. Schaefer (*Berl. Klin. Woch.*, No. 21, 1881; *Der Prakt. Arzt.*, No. 1, 1882), having abundant opportunity of observing the well-known fact that the preparations of ergot at present in use are very prone to lose their activity after being kept for a short time, has arrived at the conclusion that the uncertainty in the action of the drug depends directly upon the longer or shorter period of time which may have elapsed since the crushing of the individual corns, and that a certain result can only be expected from ergot recently pulverised. To this end he has for many years forbidden the storage of powdered ergot in the 'Apotheke' which he employs, insisting upon the corn being fresh ground in a mill in the presence of his messenger. This precaution (not demanded in the German *Pharmacopœia*) has had the result of obtaining for the druggist a local reputation for the excellence of his ergot amongst surrounding practitioners. The explanation is found by Dr. Schaefer in the protective action of the horny covering of the corns, which, by completely excluding air from the central parts, prevents the rapid change in the sclerotinic acid, etc., which follows exposure to the atmosphere even for a short period, by which so much of the activity of the drug is lost. He believes that, by the universal adoption of this precaution, ergot would rapidly retrieve its tottering reputation. E. CLIFFORD BEALE.

15. *Rohrer on Coto Bark.*—In the *Correspondenzbl. für Schweizer-Aerzte.*, No. 22, 1881, Dr. Rohrer reports very favourably on the use of coto bark and its preparations, the one which he uses being the tincture of coto (dose, 4 to 10 drops for children, 15 to 30 for adults); also the crystalline alkaloid "cotoin" (5 to 15 centigrammes for a child, up to 30 centigrammes for adults). He has used it in 180 cases, viz., 162 of diarrhœal disorders, 15 of typhoid fever, and 3 of hyperidrosis, and finds that no remedy of those usually used in these affections offers such great advantages as coto, more especially in the treatment of the diarrhœa of children. The dose of the powdered bark is 1 to 3 centigrammes for children, and up to 30 centigrammes for adults; and it is given hourly in water.

16. *Rivet on some Additional Effects of Sulphate of Quinine.*—M. Rivet (*L'Union Méd.*, Nov. 1, 1881) observed some rare effects said to be produced by quinine in three patients; in the first, scarlatinal eruption, with vomiting and dyspnœa; in the second, vesical spasm and hæmaturia, accompanied by urticaria; and in the third, another salt of quinine had been exchanged for the sulphate, which now produced vomiting, dyspnœa, præcordial anxiety, and diarrhœa. As a means of combating these unpleasant effects, Rivet recommends morphia administered subcutaneously.

17. *Brieger on the Therapeutic Value of Resorcine and Chinoline.*—Dr. Brieger (*Deut. Med. Zeit.*, Feb. 2, 1882) has carried out experiments on resorcine and chinoline in the clinic of Dr. Frerichs, and gives the results in a paper read on January 30, at the meeting of the Verein für innere Medicin. Resorcine was first recognised as a check to decomposition and fermentative processes and as a powerful antiseptic, by Andeer, and it was believed that there was no external disease in which it did not prove effective. Brieger has, however, got no good result from even a 5 per cent. solution in gonorrhœa. Internally, he tested its antifermentative and antipyretic qualities in typhus and pneumonia, and found that doses of 1½ grammes lowered the temperature somewhat; however, the larger number of the patients thus treated fainted easily, complained of tinnitus aurium, and exhibited startling delirium. In a few patients the pulse became small and soft, the heart's impulse less strong; heavy rigors and perspirations followed, and, lastly, collapse, from which they were with difficulty recovered. If the dose were pushed beyond 3 grammes symptoms analogous to poisoning by carbolic acid were observed; whilst the lowering of temperature only lasted a short time, to be succeeded, in from one and a half to two hours, by increase of fever and temperature to even a higher degree than before. The nausea was also very objectionable. It might be suggested that, as small doses lowered the temperature for a time, larger doses could be administered to lengthen the effect; but against this is the fact that resorcine is excreted as ether and sulphuric acid, and only a part is further oxidised and forms coloured products of oxidation. Hence, as resorcine is administered, the body becomes poor in sulphuric acid, and receives bodies which act as poisons on it. As an antipyretic, therefore, this drug is not to be recommended on any account. It has also been lauded in intermittent fever; but, as in well-constructed hospitals this fever is observed to pass over favourably without medication, Brieger has not administered resorcine to the patients. He has used the other agent, chinoline, without the slightest effect in typhus, pneumonia, rheumatism, and remittent fever; it being in some cases vomited, thereby probably reducing the temperature very slightly. It has also bad effects following its administration, *e.g.*, disturbances of digestion, vomiting, and nausea; so that it does not seem advisable to use chinoline in its present form. Hiller has made similar observations, which were extended to phthisis and enteric fever, with like results, using the tartrate of chinoline, which is very insoluble and of a very disagreeable taste, producing vomiting in three-fourths of all the patients to whom it was given; he has therefore abandoned it. Guttmann used resorcine as a wash for the bladder in chronic cystitis in three patients, in whom it caused intense pains and hæmaturia with renal elements, which at once ceased when salicylic acid solution was used. He trusts that such washings-out with resorcine will never be undertaken again. Brieger, lastly, is astonished that Soltmann recommends it for children with stomachic ailments. F. WILLIAM ELSNER.

MEDICINE.

RECENT PAPERS.

1. STCHEGLOFF.—Successful Faradisation of the Enlarged Spleen in Malarial Cachexy. (*Trans. of Caucasian Med. Soc.*, No. 3, 1881.)

2. RYBALKIN.—Changes of Cutaneous Sensibility in the Febrile State. (*Vratsch.*, No. 1, 1882.)

3. VARELA.—Anæmia Treated Successfully by Injections of Defibrinated Blood. (*El Genio Medico-Buidury.*, Jan. 22, 1882.)

4. MILIOTTI.—A Case of Cortical Hemiplegia. (*Gaz. Med. Ital. Prov. Venete*, Nos. 6 and 8, 1882.)

5. POMMAY.—Two Cases of Gastric Epilepsy. (*L'Encephale.*)

6. LASÈGUE.—Certain Nervous Phenomena in Diabetes. (*Jour. de Méd. et de Chir. Pratiques*, March 1882.)

7. BUNCE.—Contagion through Domestic Animals. (*New York Med. Rec.*, March 4, 1882.)

8. LUYS.—Emotional Hemiplegia. (*L'Encephale*, Sept. 1881.)

9. TESCHEMACHER.—Diabetes with Maniacal Symptoms. (*Berl. Klin. Woch.*, Aug. 1, 1881.)

10. KERAVAL.—Pericarditis in Bright's Disease. (*Etude Clinique*, Paris.)

11. RENDU.—Hepatic Abscess. (*La France Médicale*, June 7, 1882.)

12. BALLET.—The Tendon-Reflexes in Typhoid Fever. (*Le Prog. Méd.*, Oct. 8, 1881.)

13. RAYMOND and DREYFUS.—Aphasia. (*Archives de Neurolog.*, No. 7, 1882.)

14. BALL.—Functional Cerebral Ischæmia. (*L'Encephale*, No. 1, 1882.)

15. WOOD.—The Identity of Variola and Vaccinia. (*North Carolina Med. Jour.*, Jan. 1882.)

16. BUZZARD.—Symmetrical Sciatica in a Diabetic Patient treated by Salicylate of Soda. (*Ibid.*, Feb. 1882, p. 302.)

17. BEALE.—Hernia of the Lung through the Diaphragm. (*Ibid.*, Jan. 1881, p. 139.)

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1. *Stchegloff on Faradisation of the Spleen in Intermittent Fever.*—The author (*Trans. of the Caucasian Med. Soc.*, 1881, No. 3) relates a case in which six faradaic applications of twenty minutes long each, at intervals of three days, produced diminution of the splenic tumour, as well as rapid improvement of general nutrition of the patient. As the fever never reappeared, Dr. Stchegloff concludes that the cure was radical. [A report of forty-two cases of intermittent fever, successfully faradised by Dr. Schroeder of St. Petersburg, may be found in the LONDON MEDICAL RECORD, October 1880, p. 409. —*Rep.*]

2. *Rybalkin on Cutaneous Sensibility in Febrile States.*—Having carefully examined seventy-two patients (sixty males and twelve females) attacked with febris recurrens, Dr. Rybalkin arrived at the following conclusions (*Wratsch*, No. 1, 1882). 1. On the development of the second attack of recurrent fever, the sensibility to touch and pressure increases. 2. At the same time, the sense of temperature decreases. 3. Electro-cutaneous sensibility and the sense of pain increase. 4. Such changes are observed even on the first day of febrile movements. 5. In uncomplicated cases, these changes of cutaneous sensibility continue during from one to three days in the febrile state of the second attack. 6. Simultaneously with defervescence, all kinds of cutaneous sensibility decrease, except the sense of temperature, which now increases. 7. The changes of sensibility are not always developed in strict parallelism with the lowering of temperature; sometimes the cutaneous sensibility remains the same on the first day after crisis as it was during the febrile state. 8. On the appearance of a third attack of recurrent typhoid, cutaneous sensibility undergoes the same changes as were observed during the second attack. 9. In some cases, no appreciable changes of sensibility are observed in the febrile state; in such cases, the individual peculiarities of patients seem to play the chief part. [Some time ago, Dr. Wroblensky made similar observations on changes of cutaneous sensibility in intermittent fever.—*Rep.*] V. IDELSON, M.D.

3. *Varela on a Case of Anæmia Treated Successfully by Injections of Defibrinated Blood.*—Dr. Desiderio Varela records a case of anæmia of a severe type, in which rapid improvement followed the use of defibrinated blood given *per rectum* (*El Genio Medico-Quirurgico*, Jan. 22, 1882). The patient was a female, aged 20, who presented in a typical degree all the symptoms of anæmia. In addition to these, however, there was a positive aversion on her part to nutrition of all kinds. The usual tonic and ferruginous remedies had proved ineffectual, and therefore, as a last resource, it was determined to resort to feeding *per rectum*. Every three hours two ounces of fresh defibrinated blood, warmed over a water-bath, were thrown into the rectum. No irritation or other bad consequences followed. A marked improvement took place as early as the third day after commencing the injections, which were gradually reduced in frequency as the functions of the stomach became restored.

4. *Miliotti on a Case of Cortical Hemiplegia.*—Dr. Domenico Miliotti (*Gaz. Med. Ital. Prov. Venete*, Nos. 6 and 8, 1882) records a carefully observed case of cortical hemiplegia, with the *post mortem* appearances. The patient was a man, aged 22, of diminutive appearance, and through life of feeble health. The earlier symptoms of his case, as observed on admission, were paralysis of the left leg, followed three or four days later by a similar condition of the left arm, in both instances ushered in by clonic spasms of one or other limb. There was no loss of consciousness, but intense cephalalgia. The left pupil was more dilated than the right, but both responded normally to light. A careful examination showed that the right arm, though perfectly immovable, had lost neither sensation nor reflex sensibility. The lower limb had lost, in great part, the power of reflex action, and exhibited a well-marked *tâche méningitique*. The highest temperature noted at any time during the case was 39.9 deg. Cent. (103.8 Fahr.) The disease gradually progressed to a fatal termination, facial paralysis being a marked symptom towards the end. On removing the calvarium, the whole right half of the cerebrum was noticed to be larger than the left, and the meningeal artery and vein of the same side were fuller than on the opposite. The right convolutions were manifestly flattened. At the base of the brain the quadrangular portion bounded anteriorly by the optic tract, and posteriorly by the peduncles, was covered by a gelatinous yellow substance, which extended as far back as the pons Varolii. The arachnoid in this region was opaque, and elevated by a serous effusion. Superiorly, the dura mater was adherent throughout the longitudinal sulcus. There were here evident traces of recent meningitis. On the surface of the frontal, the ascending parietal, and of the postparietal convolutions, the brain-substance had been converted into caseous matter. On cutting through the fissure of Rolando, and thus separating the hemispheres

near the centrum ovale, a nucleus of yellow cheesy-like matter was found, nearly as large as a pigeon's egg. This oval nucleus did not extend to or involve the grey central ganglia. The corpus striatum and the optic thalami of both sides were healthy. The optic nerves, the oculo-motor, and other nerves, the peduncles, and the Varolii pons were more or less shrivelled and anæmic. The author remarks that the hemiplegia must be attributed to the caseous degeneration which had taken place in the convolutions above-named, in relation with which are the centres of motion. The traces of recent meningitis cannot be accepted as sufficiently accounting for the hemiplegia, though they may be accepted as explaining the final symptoms which occurred before death, namely, vomiting, and the ocular movements above-described. No microscopic examination of the brain-tissue was made. LITTON FORBES.

5. *Pommay on Gastric Epilepsy.* — In a recent work (*L'Encéphale*) M. Pommay publishes two cases of epilepsy, produced by digestive disturbances, and characterised by convulsive attacks accompanied by vomiting of food, followed by gastric distress, and supervening three or four hours after some departure from regimen, either in liquid or solid food. Dr. Pommay considers gastric epilepsy as a form of sympathetic epilepsy, and places it in men in the same rank as uterine epilepsy in women. His paper terminates with the following conclusions. 1. Disturbances of digestion may produce various nervous symptoms due either to paralysis, or to excitation of the vagus nerve. 2. These phenomena are of reflex origin, and occur entirely within the sphere of the vagus nerve (irritation of its sensory gastric branches, stimulation or paralysis of its cardiac branches). 3. The phenomena of stimulation are shown by epileptic attacks, and the paralytic phenomena by cardiac crises (quickened pulsation of the heart and loss of rhythm). 4. The usual condition of health of the patient seemed to have some influence on the method of response to irritation. 5. Gastric epilepsy differs from other forms of epilepsy in, *a*, the cause, that is to say, any departure from ordinary regimen; *b*, the symptoms, which are vomiting of food, in addition to the ordinary symptoms; *c*, the results, or the gastric disturbance.

6. *Lasègue on Certain Nervous Phenomena in Diabetes.*—Prof. Lasègue (*Jour. de Méd. et de Chir. Prat.*, March 1882) relates several cases of syncope and apoplexy, followed by transient hemiplegia, occurring in diabetic patients. One of the cases on another occasion presented a large patch of anæsthesia on the thigh. These phenomena are apt to recur; the paralysis is usually incomplete or soon disappears.

7. *Bunce on Contagion through Domestic Animals.*—Dr. W. Bunce reports (*New York Med. Record*, March 4, 1882) two instances in which diphtheria was communicated by cats to the members of the families in which they lived.

8. *Luys on Emotional Hemiplegia.*—Dr. Luys (*L'Encéphale*, Sept. 1881) has drawn attention to the emotional condition often presented by hemiplegics, sometimes immediately, sometimes after the disease has existed for months. He has found in seven cases a lesion of the upper part of the right temporal lobe, at the bottom of the fissure of Sylvius. He suggests the existence of inhibitory zones in the brain-cortex which restrain the emotions, their destruction being followed by loss of this control.

9. *Teschemacher on Diabetes with Maniacal Symptoms.*—Dr. Teschemacher of Neuenahr (*Berl. Klin. Woch.*, Aug. 1, 1881) has recorded a case of diabetes mellitus in a young man, aged 26, who had had good health up to two years previously. His father, and mother, and sisters were living and healthy, but a maternal uncle died of diabetes. He attributed his illness to profound moral emotion caused by the death of a friend, with whom he was walking on the seashore, and who fell when scrambling over some rocks, and was picked up dead. Six months later he began to lose strength, and his medical attendant discovered sugar in his urine. He ultimately came to Neuenahr. He was a young man of feeble development, very thin, with a dry fissured tongue covered with a brown coat, scarcely any appetite, and irregular bowels; there were no abnormal physical signs. The urine was acid; the quantity in twenty-four hours was about 90 ounces, and contained 2 per cent. of sugar; there was no albumen; its specific gravity was 1033. On diabetic diet, and using the water of the spring, he gradually improved: his tongue became clean and moist, his appetite returned, and his general condition improved. The quantity of urine diminished, and the sugar varied from 0.5 to 1.5 per cent. After about three weeks, his nurse reported that the behaviour of the patient was often very strange: he would lie on his sofa muttering to himself, then spring up and run and gesticulate about the apartment, and threaten to take his life, so that she removed all cutting instruments. Five weeks later the patient desired to go home, but wished to have his urine analysed before going, and left the sample himself (it was of specific gravity 1029, and contained 1 per cent. of sugar) at the doctor's house. Three hours later, he was said to be dying, and when Dr. Teschemacher saw him, he was in a comatose state: his skin was livid, cold, and moist; his pulse small, soft, and frequent; respiration was loud and deep; the pupils were dilated, and not reacting. The nurse reported that on the previous evening the patient had been in a violent fit of rage, and had seized a knife and threatened her, and said he would murder the whole household. She, thinking he was drunk, locked him in his bedroom, where he became quiet and went to bed. In the morning he complained of not being very well, but got up and went to drink the water, and afterwards had his breakfast as usual. An hour later he complained of acute pain over the liver, vomited, and tried to get into bed, but was not strong enough to do so. On inquiry, it appeared that his bowels had not been open for five days. Sixteen hours later he died. In commenting upon this case, Dr. Teschemacher suggests that the condition called diabetic coma closely resembles traumatic shock, which, according to Goltz, is probably due to reflex paralysis of the vaso-motor nerves, especially the splanchnics, so that the blood accumulates in the great abdominal venous trunks, and leaves the peripheral vessels and other organs bloodless; hence the pallor and coldness of the skin, the weakness of the muscles. The irregularity of the heart and its temporary intermissions explain the small, irregular, compressible pulse; anæmia of the brain causes the cerebral symptoms. He attributes this to a lesion of the sympathetic nerve, and alludes to previous observers who have found changes in the sympathetic ganglia.

10. *Keraval on Pericarditis in Bright's Disease.*—M. Keraval (*l'Etude Clinique et Experimental sur la Péricardite Urémique.* Paris: A. Delahaye) has sought to elucidate the causation of pericarditis in Bright's disease, by injecting urea into the pericardial sacs of healthy dogs, or of dogs rendered uræmic

by ligature of the ureters, but in no case succeeded in producing pericarditis. Injection of carbonate of ammonia into the pericardium of healthy dogs was equally without result.

11. *Rendu on Hepatic Abscess.*—M. Rendu (*La France Méd.*, 7th Jan. 1882) has recorded a case of abscess of the liver cured by a single aspiration. The patient was a butcher, aged 29, who was suddenly attacked by shivering, fever, loss of appetite, pain at the pit of the stomach, lumbar pain, etc., soon followed by a swelling in the right side, which rapidly increased to the size of two fists, was round, fluctuating, and followed the movements of the liver, not passing the limits of the false ribs. Aspiration gave exit to 800 grammes (26 ounces) of brownish pus, unmixed with bile or hydatid débris; and palpation discovered a vast cavity hollowed out of the liver. After the operation, there was neither fever, nor pain, nor any reproduction of the pus; and three weeks later, the patient was cured.

Robert Saundby, M.D.

12. *Ballet on the Tendon-Reflexes in Typhoid Fever.*—Ballet (*Prog. Méd.*, October 8, 1881) finds that the spinal reflex action, especially the tendon-reflexes, is usually exaggerated in typhoid fever; never diminished, as Petit-Clerc asserts to be generally the case. In one instance which proved fatal, there were ankle-clonus, increased knee-reflex, and a kind of clonus affecting the masseters, and induced by depressing the chin. No abnormal appearance was found in the spinal cord. M. Ballet has examined seventeen cases of enteric fever, and has never found absence of knee-reflex, but nearly always exaggeration of this phenomenon.

13. *Raymond and Dreyfus on Aphasia.*—Drs. Raymond and Dreyfus (*Archives de Neurologie*, No. 7, 1882) suggest an explanation for those cases of left hemiplegia which are accompanied by aphasia. It is well known that left hemiplegia occurring in a left-handed patient is often attended with aphasia. But there are cases not capable of this interpretation. The authors give two instances in which left hemiplegia was found as usual to depend on lesion of the right half of the cerebrum. The concomitant aphasia, however, was due to softening of the third frontal convolution of the left side. They recommend that in such cases a thorough examination should be made, not only of the cortex of the speech-centre, but also of the subjacent white matter. In short, it often happens that the brain is the seat of multiple lesions; and hence it is not permissible to condemn Broca's proposition as to the localisation of the speech-centre, because left hemiplegia and aphasia co-exist in a right-handed individual.

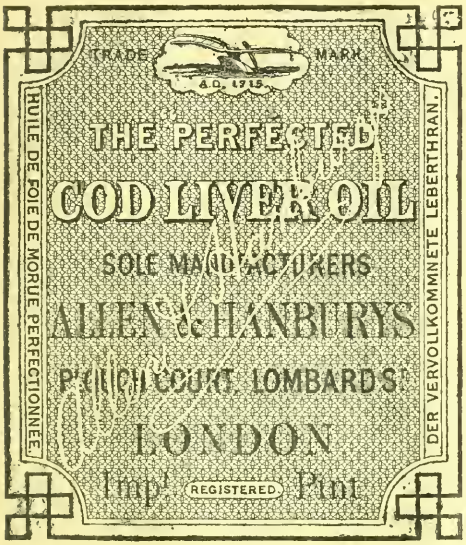
14. *Ball on Functional Cerebral Ischæmia.*—Professor Ball narrates some interesting cases in which cerebral symptoms supervened, probably in consequence of a circumscribed cerebral anæmia (*L'Encephale*, No. 1, 1881). One patient, whose history is given in full, was attacked by sudden loss of speech without any disturbance of motion, of sensation, or of the intellectual faculties. There was no glossoplegia, but, on attempting to speak, the tongue was seized with a kind of cramp. Recovery took place suddenly without treatment. Another patient presented almost identical symptoms, but there was, in addition, complete deafness on the left side, constant and severe headache limited to the left temporal region, and marked sexual excitement. The onset of the attack was sudden, with loss of consciousness. No improvement took place. The third case was that of a man who was abruptly seized with profound intellectual disturbance and almost complete loss of motion and sensation. There were total glossoplegia, and consequent inability to articulate. Recovery took place gradually. The fourth case was that of a young man, who suddenly became deaf and dumb after a violent fit of anger. It was found that he had also complete left hemianæsthesia, and subsequently slight left hemiplegia and facial paralysis. All the special senses were affected on the corresponding side. The deafness, however, was double. He was cured rather rapidly by the application of the galvanic current. Two relapses ensued, from which he recovered only partially. In the fifth case, the symptoms resembled those of acute dementia. The patient, a young man aged 33, was unable to perform any movement or to satisfy any natural wants voluntarily. When spoken to, he repeated the words automatically, evidently not understanding the nature of the question. There was also right hemiplegia with partial hemianæsthesia. Recovery was gradual. Professor Ball believes that these cases were dependent on spasm of the cerebral arterioles proceeding to certain regions of the brain. The author asserts that he has often discovered *post mortem* evidence of localised cerebral anæmia, without the existence of thrombosis or embolism.

W. B. Hadden, M.D.

15. *Wood on the Identity of Variola and Vaccinia* — Dr. Wood (*North Carolina Med. Jour.*, Jan. 1882, vol. ix) is of opinion that small-pox and cow-pox are not identical, for the following reasons. 1. Cow-pox has never by any means been converted into small-pox. 2. In the light of attempts made by careful experimenters to produce small-pox by the inoculation of the cow with small-pox virus, and of the large number of failures, together with the numerous positive denials made of the possibility of success, it may be concluded that small-pox virus is never converted into vaccine by transmission through the cow. 3. Cow-pox does not become epidemic, nor does it spread by effluvia from the human subject. 4. Structurally considered, the vesicles of vaccination and small-pox are very dissimilar; clinically, they are not unlike, but have sufficient points of difference to enable the skilled observer to distinguish between them. Dr. Wood criticises the experiments of Ceely, Badcock, and others, and gives some details of experiments made by American observers with regard to the subject. None of the experimenters succeeded in getting vaccinia from inoculating cows with small-pox matter, but on one occasion he himself had inoculated a cow with small-pox matter, and small vesicles resulted. Two children of a family were inoculated with lymph from these vesicles. The inoculation resulted in a genuine small-pox, which went through the family in various grades of intensity.

John MacCombie, M.D.

16. *Buzzard on Symmetrical Sciatica in a Diabetic Patient treated by Salicylate of Soda.*—Dr. Thomas Buzzard reports, in the *Lancet*, Feb. 1882, p. 302, the case of a lady, aged 68, who had for several years suffered from diabetes, and was attacked by severe and agonising pain in the course and distribution of both sciatic nerves. Three doses of 15 grains each of salicylate of soda quickly and effectually removed the pain, after morphia had failed to do so. Dr. Buzzard says this was the first case of symmetrical neuralgia, occurring in the course of diabetes, that had fallen under his notice, and thinks the rarity of the occurrence and the facility of cure in this instance worthy of notice. Dr.



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See also—*British Medical Journal*, Nov. 13th, 1880; *Medical Times & Gazette*, Jan. 1st, 1881; *Medical Press*, Jan. 26th, 1881.

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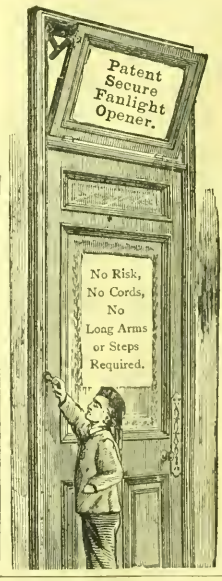

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Buzzard finds that Dr. Jules Worms had noticed, in 1880, the fact that symmetrical neuralgia did at times occur in combination with diabetes. Rosenstein had also advised examination of the urine in all cases of obstinate neuralgia.

17. *Beale on Hernia of the Lung through the Diaphragm.*—In the *Lancet*, Jan. 1882, p. 139, Mr. E. Clifford Beale records the case of a man aged 22, who, on August 11. 1881, fell from his cart, and received a severe injury of the chest. After prolonged suffering, he died on October 29th. The report of the *post mortem* examination is too long for transcribing, but the fact that two portions of the right lung were found amputated and lying loose in an abscess situated between the right lobe of the liver and the diaphragm invests the case with much interest. An interesting summary of what is known upon the subject of diaphragmatic hernia concludes Mr. Beale's paper. RICHARD NEALE, M.D.

SURGERY.

RECENT PAPERS.

1. QUINTIN.—Fracture of the Olecranon. (*Centralbl. für Chir.*, No. 48, 1881.)
2. KÜMMELL.—The Treatment of Fractured Thigh in Infants. (*Berl. Klin. Woch.*, No. 4, 1882.)
3. MASON.—Compound Fracture of the Leg. (*Med. News*, No. 1, 1882.)
4. BOZEMAN.—Removal of a Cyst of the Pancreas. (*New York Med. Record*, Jan. 14, 1882.)
5. WÖLFLER.—Iodoform in Wounds of the Mouth. (*Centralbl. für Chir.*, Dec. 3, 1881.)
6. DUPLAY.—Trephining in Fracture of the Skull. (*Archives Gén. de Méd.*, Jan. 1882.)
7. STILES.—Treatment of Distal Dislocation of the Clavicle. (*Trans. of New York State Med. Soc.*, 1881.)
8. CHARCOT.—Deposits of Blood at the Fold of the Elbow. (*Revue de Thérap.*, 1882.)
9. GALLICO.—Extrapericardial Aneurism of the Aorta Treated by Galvano-Puncture. (*Gaz. Med. Ital. Prov. Venete*, Dec. 31, 1881.)
10. SOKOLOFF.—The Treatment of Aortic Aneurism by Sculptor's Clay. (Botkin's *Ejenedelnaya Klinitscheskaya Gaz.*, No. 33, 1881.)
11. WHITEHEAD.—The Surgical Treatment of Hæmorrhoids. (*Ibid.*, Feb. 1882, p. 148.)
12. WHEELER.—Nerve-Stretching in Traumatic Tetanus. (*Ibid.*, Dec. 1881, p. 984.)
13. SIMS.—The Treatment of Gunshot Wound of the Abdomen in Relation to Modern Peritoneal Surgery. (*Brit. Med. Jour.*, March, 1882, p. 304.)

1. *Quintin on Fracture of the Olecranon.*—In an abstract by Dr. A. Bidder, in the *Centralb. für Chir.*, No. 48, 1881, of a recently published pamphlet by Dr. J. Quintin of Bonn, three cases of partial fracture of the olecranon are recorded. In each of these cases, the fractured portion of the process was that in front and in contact with the humerus, the dorsal portion remaining intact. All the patients complained much of pain in the injured part. There was but moderate swelling, and in each case the forearm could be flexed and straightened, though slowly, to the full extent. In the first case, which did not come under surgical notice until the eighth day after the injury, a small projection could be felt at the margin of the olecranon, and beyond this a notch. In the second case, a shallow groove, about a line in length, could be distinctly felt on the outer margin of the olecranon, near its attachment to the head of the ulna. In the third case, slight yielding of the olecranon, on pressure, could be made out. Partial fracture of the olecranon may be easily overlooked, and, no doubt, is often treated as a simple contusion. There is much variety in fractures of the olecranon. In many cases the process, though completely fractured, still remains in position and attached to the rest of the ulna, being fixed by the prolonged fibres of the tendon of the triceps, and also by some fibres of the internal ligament. If these tendinous and ligamentous attachments be ruptured, the olecranon becomes separated from the ulna, often to a considerable extent. In discussing the question, why, in cases of fracture of the olecranon through direct violence, the tendon of the triceps sometimes is ruptured and sometimes remains intact, Dr. Quintin refers to the following views of Professor Madelung. If the olecranon be broken by force applied directly to this process whilst the forearm is flexed, the fracture will commence at the dorsal surface of the bone and pass forwards towards the anterior surface; and, at the same time, the prolongation of the triceps tendon over the olecranon will be torn through. If, on the other hand, the violence be applied not directly to the olecranon, but to the upper third of the forearm, the limb being flexed, there is more likely to be a fracture through one of the condyles, or a T-shaped fracture of the lower extremity of the humerus, or, again, a fracture through the olecranon, starting at its anterior and cartilaginous surface, and leaving intact the tendinous bands on the posterior surface. Dr. Quintin reports three cases of ununited fracture of the olecranon, treated according to the method recommended by Professor W. Busch in 1864. This method consists in fixing the elbow, the forearm being semiflexed, in a plaster-of-Paris splint, and then, after a 'window' has been made in this splint so as to expose the olecranon, in applying Malgaigne's hooks, with one end driven into the olecranon and the other below into the plaster splint. By working the screw, the olecranon may be brought into close apposition to the upper extremity of the ulna. Malgaigne's apparatus, when used for this purpose, is slightly modified by Busch, since, at one extremity, there is but a single hook, which is inserted into the olecranon. The two hooks left at the other extremity are inserted into the plaster-of-Paris near the lower margin of the opening made in the splint over the back of the joint. Dr. Quintin's cases show that Malgaigne's hooks, applied in this way for the treatment of ununited fracture of the olecranon, may remain for some weeks without causing inflammatory mischief; but no proof is here given that this method of treatment has any superior advantages.

2. *Kümmell on the Treatment of Fractured Thigh in Infants.*—Dr. Hermann Kümmell of Hamburg writes, in the *Berl. Klin. Woch.*, No. 4, 1882, that, for the treatment of fracture of the femur in an infant, the safest and most convenient and successful method is that of vertical extension. This method was first tried by Dr. Schede of Berlin, in 1877, and has since been carried out by this surgeon in all his cases of fractured thigh in children under two years of age, and also in some cases in which horizontal extension had failed with children between three and four. In horizontal extension, in addition to the eczema and excoriation caused through the constant soiling of the bandages by excretions, and to the great labour attending frequent renewal of the bandages, especially when it is necessary, as in fracture through the upper third of the femur, to include

the pelvis, there is the further evil of enforced frequent movement of the injured part, through which movement consolidation is retarded, and dislocation and shortening of the fractured extremity rendered probable results. In this method of treatment, a long continuous band of plaster is fixed to both sides of the injured limb, as high as the seat of fracture, and applied so as to form a free loop below the sole. This long strip is then secured in the ordinary way by circular strips of plaster and by circular turns of a bandage. The leg, having been elevated, is then kept in the vertical position, with the corresponding side of the pelvis suspended, by means of a piece of cord fixed to the loop of plaster, and either attached above to some object over the bed or slung over a pulley, with its free extremity supporting a weight. The fragments of the broken bone then fall into proper position, and remain so, if the extension be maintained until firm union is established. The little patients, it is stated, tolerate this treatment very well, and at once cease to suffer from pain in the injured thigh. Vertical extension does not necessitate constant and complete rest on the back; but Dr. Kümmell does not insist on this as one of the advantages of the method, as he is opposed to the view held by many surgeons, that prolonged rest on the back is dangerous with young patients, and that it causes pulmonary affections and disturbance of the general health. Rotatory displacement of the fragments is not to be feared as a result of vertical extension. In most of the cases observed by Dr. Schede and the author, callus has formed rapidly and in abundance; and in healthy children, it is asserted, consolidation of the fragments is usually well established by the end of the third week, when the bandage and strapping may be removed and the limb lowered. The usual result of this treatment is stated to be speedy and firm union, without displacement, and without any shortening of the injured limb. One disadvantage is mentioned as likely to occur in female infants subjected to this mode of treating fractured thigh. As a consequence of free entrance of air into the gaping ostium vaginæ, the little patient may suffer from severe vaginal catarrh, which condition will persist as long as the vertical extension is kept up, but subsequently may be soon removed by careful cleansing and the local application of weak astringents. A tabular statement is appended of twenty-eight cases of fractured thigh in infants treated by this method. Of these patients, twelve were under twelve months of age, and sixteen between the ages of one and two years.

3. *Mason on Compound Fracture of the Leg.*—In a paper read before the New York Surgical Society (*Med. News*, No. 1, 1882), Dr. Erskine Mason considered especially the period of time required for repair of compound fracture of one or both bones of the leg, as well as the best method of treatment according to his own experience. In his treatment of thirty cases, he had used almost every variety of splint, and finally reached the conclusion that the plaster-of-Paris dressing in some one of its varieties, with or without brackets, applied either early or late, met the indications in the majority of cases, better than any other appliance. He had used through-drainage in connection with the plaster-of Paris splint, and it had become with him a favourite mode of treatment. The results obtained from this treatment had been better than those which usually followed the old practice of sealing the wound. Dr. Mason then spoke of the too free use of the drainage-tube, or, at least, its too early introduction. His observations in these cases had also led him to believe that we might, at times, have too implicit belief in antiseptic dressings, and attempt to save limbs which, as proved by results, ought to have been condemned to amputation. Of the thirty cases, there was fracture of the tibia in sixteen, of the fibula in three, and of both bones in eleven. In seven cases it was found necessary to amputate, primarily in five, of which three recovered and two died, secondarily in two, both of which recovered. Eighteen cases were treated by plaster-of-Paris dressings, either by the bandage alone or by the bandage strengthened by brackets. Of these, nine were put up at once, and nine were dressed after the lapse of some days, the average period of this treatment being twenty-four days. In the cases in which plaster-of-Paris was applied immediately after the accident, the average period of removal of the dressing was the twenty-fourth day; and, in the other cases, the thirty-eighth day. Among the eighteen cases there were four deaths, one from pyæmia on the eighth day, one from shock on the forty-first day, one from alcoholism on the seventh day, one from erysipelas on the sixty-first day. The average duration of the treatment was eighty-two days. Four cases were treated by 'through-drainage'. The average duration of treatment in these cases was forty-nine days. W. JOHNSON SMITH.

4. *Bozeman on Removal of a Cyst of the Pancreas.*—Dr. N. Bozeman reports, in the *New York Med. Record* for Jan. 14, 1882, the removal during life of a cyst of the pancreas, weighing 20½ pounds. The case is interesting from the fact that it is the first operation of the kind on record. It was mistaken for an ovarian cyst. Five years ago the abdomen began to enlarge on the left side, and gradually increased until the entire cavity was distended symmetrically. Upon opening the abdomen, the uterus and ovaries were found perfectly normal, and upon careful examination the pedicle was found attached to the junction of the outer third of the pancreas. It was transfixed and tied in the usual way. The patient was discharged cured on the thirty-eighth day after the operation.

5. *Wölfler on Iodoform in Wounds of the Mouth.*—Wolfler (*Centralbl. für Chir.*, Dec. 3, 1881; and the *Cincinnati Lancet*) says that the efficacy of the local use of iodoform in tuberculous affections of the joints, and its efficacy in the treatment of wounds where sutures are inapplicable, has recently led Professor Billroth to test its use in wounds near the natural apertures of the body, particularly since antiseptic dressings to these parts have been found unmanageable. From April to October 1881, 18 carcinomata of the tongue were removed in the Vienna clinic. In some of these cases, the third or half the tongue was excised, although in the majority the organ was removed in its entirety. In many of the cases, it was found necessary to remove part or all of the floor of the mouth to the hyoid bone. In several cases the submaxillary gland and lymphatics, as well as parts of the soft palate and pharynx, were removed. To render these extensive operations practicable, the inferior maxilla had to be divided, and in a number of cases was partially removed. To prevent excessive hæmorrhage and flooding of the field of operation, the operations on the tongue were, as a rule, preceded by ligature of the lingual and facial arteries. In all of the 18 cases, a complete cure was effected. In none of the cases was there any local disturbance, and in only a few was there any elevation of temperature except during the first few

days. Since the technicalities of the operation had not been altered, these fortunate results must be attributed to the treatment of the wounds with iodoform. The main points of this treatment can be summarised as follows. When, after amputation of the tongue and floor of the mouth, the latter communicates with the external wound through which the lingual artery was tied, a large drainage-tube is passed through this opening into the mouth. If the floor of the mouth have not been injured by the operation, Billroth no longer perforates it for drainage purposes. After the operation, a piece of iodoform-gauze, six to ten inches in length and one to two inches in width, folded upon itself, is introduced into the wound and pressed against the surface operated upon. This small piece of gauze suffices to completely and permanently keep the wound free from septic changes. The piece of gauze thus introduced after the operation clings to the wounded surface for from five to eight days. It does not come out spontaneously before this length of time has elapsed, and does not interfere with the deglutition of the patient. The iodoform gauze is prepared as follows: 60 grains of resin are dissolved in 1,200 grains of alcohol, and 50 grains of glycerine are added to this solution. Into this are placed six yards of gauze, from which the excess of solution is to be squeezed out. When this gauze is half-dried, 50 grains of powdered iodoform are dusted upon it. If the results obtained in these cases of Billroth be compared with those achieved in similar cases in former cases, it becomes apparent that in the iodoform we have a powerful means of preventing the septic changes that usually carried off patients who had been subjected to capital operations about the mouth.

6. *Duplay on Trephining in Fracture of the Skull.*—Dr. Duplay (*Arch. Gén. de Méd.*, Jan. 1882) comes to the following conclusions respecting fracture of the skull and consequent trephining. 1. Far from adding to the gravity of a wound of the skull with limited circumscribed depression and fracture of the internal table, trephining is an operation inoffensive and antiseptic in character. 2. Trephining is a simple operation, which does not require rules for guidance other than those resulting from circumstances. It is a 'cleaning up' which has the advantage of transforming a complex, not easily manageable wound, liable to gangrene, into a simple aseptic wound which can be easily treated. 3. The study of the depression may lead to some knowledge of the adjacent osseous lesions. 4. The comparison of the osseous lesions thus diagnosticated and the functional symptoms observed may lead to the recognition of the nature and seat of the cerebral alterations of which the osseous lesions are the cause, and the functional troubles the result. In all injuries of the skull, the fact should not be forgotten, that an insidious change in the meninges may be set up, which would be likely to lead to serious consequences.

7. *Stiles on Retaining Dislocation of the Distal End of the Clavicle.*—Dr. Stiles (*Trans. of New York State Med. Soc.*) describes the following device for retaining dislocations of the distal end of the clavicle. The bone having been put in position, a plaster cast was taken of the parts, about 4 in. long, and 2⅞ in. wide. It is necessary to oil the part before applying the plaster. Dr. Stiles took the cast to a dentist, and requested him to make a hard rubber-plate from the cast, in the same manner as he would make a plate for a set of teeth from a plaster-cast of the mouth. When it was finished, he applied a piece of lint to the under surface of the splint and placed it on the clavicle, and found it a perfect fit. He attached to the outer or upper surface of the splint two strips of strong adhesive plaster, about 15 inches long (of the width of the two strips nearly covering the splint), which he applied to the posterior part of the chest. He then applied two more strips over those already applied, but extending in the opposite direction and diverging somewhat, and to the lower ends of these strips he fastened two India-rubber bands, about 3 in. long, and ¾ in. wide; and to the lower ends of the bands he fastened pieces of adhesive plaster with broad bases, making sufficient traction to hold the bone in place. The last-mentioned pieces of plaster were firmly fixed to the anterior part of the chest. A small roller was placed in the depression of the splint above the clavicle, and then another piece of plaster about 3 inches wide was applied from before backwards over the roller, and brought up over the roller and down on the back, and closely applied. The fore-arm was placed diagonally across the chest, and retained with adhesive strips, and a few turns of the roller, and the dressing was completed. The result was all that could be desired. There was perfect freedom of motion of the arm, and it could be put directly up beside the head as well as its fellow.

8. *Charcot on Sanguineous Deposits in the Fold of the Elbow.*—Having had the opportunity of noting five cases of sanguineous effusion in the region of the elbow, and having each time seen the hæmatoma succeeded by a tumour of a cartilaginous consistence, M. Charcot (*Rev. de Chir.*) has embodied the results in an interesting memoir. His conclusions are as follow: 1. Violence which directly affects the elbow, such as contusion, dislocation, etc., or indirectly (as sprains and diastasis), often produce considerable effusions of blood throughout the whole extent of the upper limb, and especially at the fold of the elbow. 2. These sanguineous extravasations seem to have their source in the rupture of the vessels around the joint, and especially in the tearing of the brachialis anticus muscle. 3. The effused blood is not always completely absorbed, and is transformed into fibrinous clots situated at the anterior internal side of the fold of the elbow in front of the articulation, and in the substance of the brachialis anticus. 4. The tumour thus found is as large as an egg, uneven, and of cartilaginous, and even bony, hardness. At the commencement it is independent of the bone; but subsequently may become united to the humerus. 5. The sanguineous deposits may interfere with the movements of the joint, and considerably limit flexion. 6. They generally remain stationary for a long time, and are but little influenced by ordinary treatment. 7. They may give rise to errors in diagnosis, and may be taken for exostoses of the humerus, displacement of the coronoid process, etc.

9. *Gallico on an Extrapericardial Aneurism of the Aorta Treated by Galvano-Puncture.*—Dr. E. Gallico (*Gaz. Med. Ital. Prov. Venete*, Dec. 31, 1881) records an interesting case of aneurism of the aorta, in which galvano-puncture was resorted to as a last resource. The patient was aged 57, and, when first seen, presented a small tumour in the third right intercostal space. The continuous current from Onimus' machine was first tried, in sittings of a quarter of an hour's duration. These not producing any beneficial effects, galvano-puncture was next employed. The operation was performed six times within three months. In four of the operations three needles were employed; in the first and last, four.

After each successive application the tumour presented a remarkable hardness and consolidation in its central portions. In the intervals of treatment the tumour was covered with layers of adhesive plaster, as there appeared imminent danger of rupture. The author remarks that, though this case ended unsuccessfully, it does not shake his confidence in a method of treatment which he has more than once seen result in a cure.

10. *Sokoloff on the Treatment of Aortic Aneurism by Sculptor's Clay.*—Dr. Sokoloff reports (Botkin's *Weekly Med. Gaz.*, No. 23, 1881) the case of a patient who had a rapidly growing aneurism of the arch of the aorta, associated with severe cardiac asthma, angina, and sleeplessness. Numerous remedies usually applied in such cases entirely failed to bring any relief to the sufferings of the patient. The author proceeded then to place thick layers of moist sculptor's clay on the site of the pulsating tumour. The patient was rapidly relieved of sleeplessness and anginal paroxysms, 'thoroughly revived', and, in a few weeks, was able to return to his usual occupation. Twelve months later, examination of this patient showed that the aneurismal sac and its pulsation had considerably diminished. Dr. Sokoloff obtained the same results in some other similar cases. He remarks that it is impossible to find any other explanation of the therapeutic action of the clay than its pressure and cooling property; and he believes that 'the clay acts on cardiac neuroses as various metals do in certain cases of peripherical neuralgies'. [In the LONDON MEDICAL RECORD, July 1880, p. 284, is to be found an interesting report of Dr. Hewson's treatment of uterine fibroids by dry earth or clay.—*Rep.*] V. IDELSON, M.D.

11. *Whitehead on the Surgical Treatment of Hæmorrhoids.*—Mr. Walter Whitehead, in the *Brit. Med. Jour.*, Feb. 1882, p. 148, describes the method in which he performs this operation, and which, from its novelty and practical value, deserves careful attention. After the patient has been carefully prepared for the operation, he is placed under chloroform in the lithotomy position, and the sphincter ani is paralysed by forcible dilatation by the aid of the two thumbs. A sponge is then passed six inches up, to prevent any fæcal discharges from coming down during the operation. The hæmorrhoids are then fully exposed and carefully dissected upwards to their highest limits, as much healthy mucous membrane being preserved as possible. The hæmorrhoidal vessel is thus left simply attached by loose cellular tissue, and, being firmly grasped by ring-forceps, is twisted until it separates. The mucous membrane is then stretched to the denuded surface at the verge of the anus, and so the open wound is closed and heals by first intention.

12. *Wheeler on Nerve-Stretching in Traumatic Tetanus.*—Mr. W. I. Wheeler, in the *Brit. Med. Jour.*, Dec. 1881, p. 984, reports a case in which this treatment was carried out successfully, as he believes, for the first time in England, or at all events in Ireland. [Dr. John Lucas, in the *Med. Times and Gaz.*, Feb. 1880, p. 202, enters fully into the history and literature of this operation, which Dr. Eben Watson first advocated. At page 216, August 1880, Mr. W. Johnson Smith reports a case in which the median nerve was stretched with successful results.—*Rep.*]

13. *Sims on the Treatment of Gunshot Wounds of the Abdomen in Relation to Modern Peritoneal Surgery.*—Dr. J. Marion Sims thus sums up the results of his experience and observation in this department of surgery (*Brit. Med. Jour.*, March 1882, p. 304). 'Finally, I have the deepest conviction that there is no more danger of a man dying of a gunshot or other wound of the abdomen, properly treated, than there is of a woman dying of ovariotomy properly performed. Ovarian tumours were invariably fatal until McDowell demonstrated the manner of cure; now 90 to 97 per cent. recover. I think we may logically draw the following conclusions from the facts previously stated. 1. Wounds of the peritoneal cavity, however made, have a common course to run. 2. They have a common termination, that is, death by septicæmia. 3. This is the general law in death from ovariotomy. 4. It is the general law in death from gunshot and other wounds of the peritoneal cavity. 5. Septicæmia in these cases is the result of the absorption of a bloody serum and other effusions found in the peritoneal cavity after wounds or operations. 6. Gunshot wounds of the pelvic cavity recover, because of natural drainage by the hack of the ball carrying off poisonous effusions and bloody serum. 7. Gunshot wounds of the peritoneal cavity die, because there is no natural drainage, and the poisonous effusions and blood fluids fall into the pelvic cavity, and are absorbed, producing septicæmia and death. 8. To evacuate this bloody fluid and other foreign effusions, it is necessary to enlarge the abdominal wound, to clear out the peritoneal cavity, to suture wounded intestines, and tie bleeding vessels, using drainage or not, according to circumstances. 9. If this operation be well done, there will hardly be need of drainage.'

R. NEALE, M.D.

OBSTETRICS AND GYNÆCOLOGY.

RECENT PAPERS.

1. BARNES, FANCOURT.—On Hour-glass Contraction of the Uterus treated by Inhalation of Nitrite of Amyl. (*Brit. Med. Jour.*, March 18, 1882.)

2. BAYER.—On the Use of Iodoform in the Lying-in. (*Centralb. für Gynäk.*, 11 Marz, 1882.)

3. CALDERINI, G.—Contribution to the Diagnosis of Fœtal Monstrosity and Hydramnios. (*Annali di Ostetricia, Ginecologia, e Pediatria*, Feb. 1882.)

4. CONIGLIONE, ANTONIO.—Contribution to the Study of the Relaxation of the Pubic and Sacro-iliac Symphyses. (*Journ. de Méd. de Paris*, 25 Mars 1882.)

5. DANBRIDGE, N. P.—A Case of Ovariotomy in which a high Temperature was successfully controlled by Cold Water. (*The Obst. Gazette*, Cincinnati, Feb. 1882.)

6. DITTEL.—A new Mode of Treatment of Vesico-Vaginal Fistulæ. (*Wiener Med. Woch.*, No. 51, 1882.)

7. DORAN.—Proliferating Cysts in the Ovary of a Seven Months' Fœtus. (*Trans. Path. Soc.*, 1881.)

8. FENGER.—Total Extirpation of the Uterus through the Vagina. (*Amer. Journ. of Med. Sciences*, Jan. 1882.)

9. FRANK.—On the Operative Treatment of Incontinence of Urine in the Female. (*Centralb. für Gynäk.*, 4 Marz 1882.)

10. GALLARD.—On Conception during Amenorrhœa. (*Annales de Gynécol.*, Mars 1882.)

11. HERRICK, O. E.—Laceration of the Perinæum. (*The Obst. Gazette*, Cincinnati, February 1882.)

12. KOCKS.—On Total Extirpation of the Uterus. (*Centralb. fur Gynäk.*, 25 Feb. 1882.)

13. MASLOWSKY, W.—On the Pathology of the Hydatid Mole. (*Ibid.*, 11 Marz 1882.)

14. MÜLLER, P.—A Modification of Vaginal Total Extirpation of the Uterus. (*Ibid.*, 25 Feb. 1882.)

15. OTT.—Apparatus for the Removal of Fluids during Permanent Irrigation. (*Ibid.*, 25 Marz 1882.)

16. Pawlik.—Catheterisation of the Female Ureters. (*Tageblatt der Naturforsch.*, 1881, S. 179)
17. Plant, W. T.—Puerperal Convulsions treated with Chloral Hydrate. (*Obstet. Gaz.*, Cincinnati, Feb. 1882.)
18. Rampoldi.—Correlation between Sexual and Optic Disease. (*Annali Universali di Med.*, Settembre 1881.)
19. Rokitansky.—Elephantiasis of the Præputium Clitoridis. (*Wiener Med. Zeit.*, No. 48, 1881.)
20. Thévenot.—The Action of the Utero-Pelvic Muscles during Labour. (G. Masson, Paris, 1882.)
21. Turetta.—Dermoid Cyst of the Ovary. (*Giornale Internaz. delle Scienze Mediche*, Anno III.)
22. Desplats.—Washing out the Uterus with Carbolic Acid. (*Jour. des Sciences Méd. de Lille*, July 1881.)
23. Warren.—Treatment of Vomiting in Pregnancy. (*Trans. of New York State Med. Soc*, 1881.)
24. Syromiatnikoff.—Prolonged Retention of the Placenta. (*Vratsch.*, No. 1, 1882.)
25. Lubimoff.—A Case of Intrafœtation. (*Vratsch. Vedom.*, No. 1, 1882.)
26. Alexis.—A Case of Hydatiform Mole. (*Vratsch. Vedom.*, No. 1, 1882.)

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1. *Barnes on Hour-Glass Contraction.*—Dr. Fancourt Barnes describes a case in which the patient, a secundipara, aged 22, had been delivered naturally, at three o'clock in the morning, of a living female child. He was sent for by a midwife of the Royal Maternity Charity at ten o'clock, because she had been unable to deliver the placenta. On examination, he found that the umbilical cord had been torn from its insertion in the placenta. The external os uteri was quite dilated, as was the cervical cavity; but the os internum, and the circle of muscular fibres above it, called Bandl's ring, the chief-seat of hour-glass constriction, were firmly contracted, and only admitted a finger, by which the placenta could be felt in the uterus. He now learnt that the midwife, hoping to accelerate the third stage of labour, had given the patient a dose of ergot as soon as the child was born. He found it impossible to get his hand into the uterus and deliver the placenta. Bearing in mind the remarkable power which nitrite of amyl possesses in relaxing tension in the blood-vessels, he determined to test its action on the uterine spasm. The patient had three drops of nitrite of amyl given her on a handkerchief to inhale, by Mr. Lingard. During the inhalation, the ring of muscular fibres round the os internum, which had been so rigid as to be absolutely undilatable, steadily yielded, until he could pass the whole hand into the uterus and detach the placenta, which was universally adherent. There was no hæmorrhage whatever, and the placenta itself presented a remarkably exsanguine appearance. On referring to the third edition of his father's *Lectures on Obstetric Operations*, he found the following: 'We possess in ergot a great, a dangerous power of augmenting the force of the uterus. We want an agent endowed with the opposite effect, that will control and suppress uterine action. I consulted Dr. Richardson on this point. He tells me the desired power exists in nitrite of amyl. Three minims of it added to one drachm of ether, taken by inhalation, is the form he recommends. It does not produce unconsciousness; but it is an anæsthetic as well as a sedative of muscular action. It is the antidote or opposite force to ergot. In it we have the desiderated epechontocic agent.' In the case in question, Dr. Fancourt Barnes found that the drug acted admirably. It relaxed the irregular contraction of the uterus, and acted as a sedative and anæsthetic, without producing unconsciousness. The case is also instructive as an example of the dangers which may result from the administration of ergot before the expulsion of the placenta. The tetanic action was no doubt increased by the traction which had been made on the cord. It is well known that ergot, when given before the birth of the child, may cause its death. This results from the blood being squeezed out of the placenta by the uterus. Although in cases of irregular contraction of the uterus that organ is firmly contracted, the contraction does not separate the placenta. On the contrary, in the cases seen by the author, the placenta has been firmly adherent, as it was in this case. Dr. Fancourt Barnes believes that he has been the first to use nitrite of amyl to relax uterine spasm. In it, he thinks, has been found a new and trustworthy addition to the resources at our command for overcoming spasmodic or trismic contractions, which will not always yield to other remedies.

2. *Bayer on Iodoform in the Lying-In.*—Dr. Bayer refers to thirty-eight observations by Mann, in No. 7 of the *Centralbl. fur Gynäk.* for 1882, in which Mann recommends iodoform as an antiseptic, with which he can keep recent wounds of the vagina aseptic and, further, render infected wounds aseptic. In this way vaginal wounds would be rendered innocuous as a cause of local or general infection. He is of opinion that the results attributed by Mann to iodoform are greatly due to the fact, that Mann washes the parts with a two-per-cent. carbolic solution before sprinkling over the iodoform. Further, he states that iodoform is useless as a protective against infection, inasmuch as the layer formed by it is rapidly washed off by the lochial discharges. Bayer himself, after giving iodoform an extended trial as an antiseptic in child-bed, is of opinion that it does not diminish the morbidity, nor the swelling of the vulva, nor does it even accelerate the granulation process in the wounds. He prefers powdered salicylic acid to iodoform as an antiseptic, the only objection being that the salicylic acid is much more painful than the iodoform. The salicylic acid forms a protecting layer over bruised wounds. He concludes by referring to a paper by Schmid, in which salicylic acid is stated to present all the advantages of iodoform.

4. *Coniglione on the Relaxation of the Pubic and Sacro-Iliac Symphyses.*—The patient was a pluripara aged 31, well developed and healthy. The first pregnancy and labour were normal. The second pregnancy was also normal, but terminated by the expulsion of a fœtus, apparently dead some time. During the lying-in, the patient was attacked with plegmasia alba dolens. The labour of the fourth pregnancy was very rapid. The child weighed 3 kilogrammes. The lying-in was normal up to the sixth day, when pains came on in the right inguinal region, which spread down to the knee, being most severe at the symphysis pubis and behind at the level of the two sacro-iliac articulations. The slightest movement was impossible, on account of the intense pain which resulted. Flexion of the thighs or legs was impossible. Examination showed that the pain was very acute on pressure against the symphysis or sacro-iliac joints. On pressing alternately over the body of the pubes, a sensation of tilting was experienced, but no crepitation could be made out. When the patient was placed on her side, all attempts at moving the sacro-iliac joints excited violent pains. When the patient was placed on her back, and two fingers in the vagina pressed alternately to the right and left of the symphysis against the posterior aspect of the pubes, the sliding move-

ment of the joint was very plain. Relaxation of the sacro-iliac joints could be detected. By supporting the patient by the axillæ, and then placing a finger underneath the lower border of the pubes and making her move her legs, it was quite easy to feel each half of the pubes alternately move up and down, following the movements of the legs, at the same time causing sharp pain. The diagnosis was relaxation of the pubic and sacro-iliac articulations, provoked by an acute inflammatory process. Absolute immobility of the pelvis for three weeks effected a cure.

16. *Pawlik on Catheterisation of the Female Ureters.*—Pawlik has found that the trigonum vesicæ can be felt more or less distinctly through the fold of the anterior wall of the vagina. He made use of this knowledge to pass a sound into the bladder and to press it on to the posterior wall, so that its movements could easily be made out. The sound is now gently and carefully pushed in the direction of the trigonum and the introduction of the sound into the ureter affected. Pawlik has successfully demonstrated this proceeding on the living subject. The importance of catheterisations of the ureters, in the diagnosis of single or double disease of the kidney is, in Pawlik's opinion, obvious. He contrasts the harmlessness and ease of this method with that recently described by Gluck, in which it is advised, in the diagnosis of doubtful cases of kidney-disease, to cut down on the ureter from the lumbar region, and temporarily ligate it.

18. *Rampoldi on the Connection between Sexual and Optic Disease.*—The author divides into five groups the conditions of sexual disorder which may influence the eye-sight. 1. Hysteria is frequently associated with asthenopia and retinal hyperæsthesia; less frequently with ptosis palpebræ and retinal anæsthesia. 2. As to menstrual disorders; in amenorrhœa, conjunctivitis, keratitis with formation of phlyctenæ, episcleritis, and iritis are observed. In suppression of the menses, from varied causes, diseases of the choroid, optic neuritis, and retinitis are not unfrequent. The tendency among such subjects to glaucoma is known. The above diseases readily follow any sudden suppression of the menstrual flow. 3. Inflammatory diseases of the sexual organs are often accompanied by hyperæsthesia and neuralgia from the trigeminus, as well as by serous iritis and scleritis. 4. In the lying-in, and during lactation, the author mentions embolic panophthalmitis in addition to the most varied diseases which may result from weakness and anæmia after galactorrhœa or protracted lactation, namely, corneal ulcer, retinal hyperæsthesia, loss of accommodation, photopsia, and retinitis. 5. During pregnancy, the disturbances associated with albuminuria gravidarum are well recognised. Frequently, pregnancy exerts an unfavourable influence on pulsating exophthalmos. Signor Rampoldi points out the influence which hæmorrhages exert on the visual power. Amblyopia or amaurosis often appears from about the third to the fourteenth day after the loss of blood.

Fancourt Barnes, M.D.

22. *Desplats on Washing-out the Uterus with Carbolic Acid.*—M. Desplats, in the *Jour. des Sciences Méd. de Lille*, July 1881, p. 452, demonstrates all the advantages which may be obtained from carbolised washings out of the uterus after delivery. The conclusions of his paper are as follows. 1. When febrile symptoms supervene after delivery, it is desirable, even if there be nothing to indicate the existence of uterine accidents, to examine the patient with the speculum, and to make sure that there are no septic products in the uterus. 2. If the existence of septic products be established, the uterus must be washed with a solution containing a one-hundredth part of carbolic acid. The washing-out should be continued until the injected liquid returns perfectly clear. 3. The washing-out should be done twice a day, and should be continued until the fever is entirely reduced and the uterus resumes its normal position. 4. If the fever be intense, it is desirable to leave in the cavity of the uterus a certain quantity of the carbolised solution, which will have the effect of rapidly lowering the temperature and ameliorating all the other febrile symptoms.

23. *Warren on the Vomiting of Pregnancy.*—Dr. Warren (*Trans. of New York State Med. Soc.*, 1881) concludes a paper on hystero-neurosis of the stomach as follows. 'The treatment of the vomiting in pregnancy resolves itself into the correction of all disturbances, functional or organic, as far as possible, which are known to excite dyspeptic symptoms, before a simple irritation becomes a confirmed gastritis, and the stomach refuses to receive the remedies most appropriate to relieve the original trouble. Among these, oftener than any other, the emotional element, and a constipated habit, with its attendant flatulence and other discomforts, accompany the pregnant state, and should receive early and prompt attention. For the relief of the former, no remedies equal in efficiency at this time the bromides of sodium and potassium, administered in full doses. In order to secure their full effect, these medicines must be administered at the proper time, generally late in the day or at bed-time, and when the stomach is empty. The constipation can be overcome by any simple laxative, as compound liquorice powder, or any other harmless medicine or formula; or, if it be obstinate, copious and repeated enemata of tepid water will unload the rectum of the hardened fæces or scybala, which frequently occur in women. Finally, when all other causes are excluded, the constipation relieved, and the emotional element controlled, and when we come to consider the purely sympathetic disorder following conception; in short, when we have to deal with the uncommon vomiting, due simply and solely, as far as we can see, to the impregnation of a healthy uterus in a healthy woman, I have found many of the remedies which have been called specific to sometimes relieve, but oftener to fail. But the one remedy which in my hands has before all others proven the most efficient for alleviating the distress, if not for curing the complaint, is Fowler's solution of arsenic, administered in drop-doses upon an empty stomach. When thus given, and with a restricted diet, it has seemed to me to come nearer a specific for this neurosis than any other. Indeed, the effect is at times almost magical, and, when continued for a considerable period, and given in larger doses when the stomach contains food, affords, in my opinion, a nerve-tonic highly essential to women in pregnancy, and which no other remedy can equal or approach. Frequently, however, after its continuance for a considerable time, benefit comes from suspending its use, and substituting nitro-muriatic acid with tincture of nux vomica, particularly if there be any inactivity of the liver or kidneys, or if anorexia exist.'

24. *Syromiatnikoff on Retention of the Placenta.*—Dr. Syromiatnikoff relates the following case in *Vratch* (*Physician*), No. 1, 1882. A peasant woman, aged 30, miscarried, being about four months pregnant. There was very little *post partum* hæmorrhage. In a week, she got up and went about her

usual work. At the end of the fourth week after abortion, she walked from her village to Moscow, the distance being nearly 35 miles. The result of this exertion was a very severe flooding; and ultimately the patient was brought to the University Hospital in an unconscious, almost bloodless, and pulseless state. On examining the genitals, the author found the uterus enlarged and the os patulous, loosely grasping the placenta. The removal of the latter proved easy; the hæmorrhage never returned, and, twelve days later, the patient walked home. The placenta, which was removed entire, was 7 centimètres long, and, in spite of its having been retained in the uterus twenty-eight days, did not bear the slightest trace of decomposition or offensive odour, but it was rather contracted and indurated; its uterine surface was covered by fresh blood. There were no old clots nor deposits on it or in the cavity of the uterus. On duly considering this case and others, the author objects to the theory of non-interference (Ruysch and Hervieux), and ardently insists on immediate removal of the retained placenta. As to the method of removal, Dr. Syromiatnikoff, following the teachings of the St. Petersburg obstetrical school (Professors Krassovsky, Horvitz, and Slaviansky), considers every instrumental aid here utterly unnecessary, and successfully removes the placenta by means of his fingers alone. The same author highly recommends the treatment of collapse by alternate hypodermic injections of an ethereal solution of camphor (camphoræ, gr. x; ætheris, ʒj), and pure cognac; several Pravaz's syringefuls of each being given in succession. The former solution rapidly improves the pulse, and the latter supports this improvement for a long time. Sometimes he injected as many as twenty syringefuls of both remedies within an hour. Invariably successful in his efforts to revive his patients, he never saw any abscesses or indurations as sequels to such injections. [Lately there have appeared a series of similar cases. Dr. W. Nicholson saw twenty-two days' retention (*Lancet*, July 16, 1881, p. 122); Dr. E. H. Jacob reported a rare case of seven months' retention (*Ib.*, Aug. 27, p. 374); Dr. Edis describes a case of fourteen weeks' duration (*Ib.*, Nov. 5, p. 817). A year or two ago, five or six cases of unusually prolonged retention of the placenta were published in the *Brit. Med. Jour.*—*Rep.*]

25. *Lubimoff on a Case of Intrafœtation.*—At a meeting of the Kazan Medical Society (*Vratch. Vedomosti*, No. 1, 1882), Dr. Lubimoff showed a very interesting case of *fœtus in fœtu*. In a female child, born alive at full term, there was found a subcutaneous perineal tumour, the right half of which was dense and the left soft. On *post mortem* examination, the author discovered that the left half of the tumour contained two cysts; the right enclosed various parts of another fœtus, namely, a fully developed foot with six toes, a rudimentary upper extremity, and a stomach. Between two divisions of this tumour were found two small dermoid cysts, with cubic epithelial cells, striated muscles, pieces of cartilage, and bones (with marrow).

26. *Alexeeff on Hydatidiform Mole.*—Dr. Alexeeff of Nijni-Novgorod reports (*Vratch. Vedom.*, No. 1, 1881) a third case of hydatidiform degeneration of the ovum (myxoma multiplex chorii). His first two cases were published in *Vratch. Vedom.*, 1878, Nos. 265 and 288. A peasant woman, aged 32, married 11 years, mother of 8 children, had signs of incipient phthisis. At the third month of the ninth pregnancy, after hard muscular exertion (she was a laundress), there appeared abundant hæmorrhage from the genitals. The hæmorrhage became persistent, severely exhausted the patient, and, two months afterwards, compelled her to enter the author's hospital. On examination, Dr. Alexeeff detected very marked tenderness of the fundus of the uterus. The os uteri was swollen, and admitted only the first phalanx of a woman's little finger. During gynæcological examination, the patient constantly started, and complained of pains in her womb. From the vagina, sanguineous secretion incessantly oozed. Abundant hæmorrhage returned every night, but was now controlled, to some degree, by the internal administration of Haller's acid elixir and Bonjean's ergotine. Though there was no 'characteristic appearance of white currants floating in a red jelly' (Angus Macdonald), the author suspected that he had to do with a case of mole, and, in the presence of the grave general state of the patient, proposed to produce abortion, which was repudiated on her part. Fortunately, at the end of the fifth month after her last menstruation, there suddenly appeared labour-pains, which, within a few hours, expelled piece-meal an enormous hydatidiform mole, accompanied by a number of recent blood-clots. The patient afterwards rapidly recovered, and twelve days later left the hospital. On examination of the expelled ovum, the author found that it consisted of a number of cysts, the size of which varied from a millet-seed to a walnut, and enclosed the normally formed fœtal liver (weighing 2 ounces), and the heart (about 1 ounce), with distinct papillary muscles. Both fœtal organs were softened, easily friable, and, under the microscope, presented no normal structure, but 'only detritus, an aggregation of formless, reddish-yellow granules, heaped in separate piles'. [Cases of uterine hydatids are very rare, as it was recently statistically shown by Dr. More Madden. According to his data, in 31,036 cases admitted into the Dublin Lying-in Hospital, there were only 5 instances of hydatidiform mole, being in the proportion of 1 in 6,207 (*Obstetrical Jour.*, Jan. 1, 1880, p. 44).—*Rep.*]

V. Idelson, M.D.

PHYSIOLOGY.

RECENT PAPERS.

1. Tappeiner.—Absorption in the Stomach. (*Zeits. für Biol.*, Band xvi.)

2. Dumontpallier.—On Hypnotism. (*Le Progrès Méd.*, No. 2, 1882.)

3. Seegen.—Action of the Liver on Peptone. (Pflüger's *Archiv*, Band xxv.)

4. Senator.—The Renal Secretion. (*Verhandl. der Phys. Gesellsch. zu Berlin*, 1881-82, No. 6.)

5. Jæger.—The Body-Temperature of Healthy Individuals. (*Deutsches Archiv für Klin. Med.*, Band xxix.)

6. Prudden.—The Transplantation of Cartilage. (*Amer. Jour. of Med. Sciences*, Oct. 1881.)

7. Luchsinger.—The Venous Pulsations in the Bat's Wing. (Pflüger's *Archiv*, Vol. xxvi.)

8. Spilman and Luchsinger.—Action of Atropia on Smooth Muscle. (Pflüger's *Archiv*, Vol. xxvi.)

9. Lewascheff.—The Relation of the Peripheric Vaso-Motor Centres to the Temperature. (Pflüger's *Archiv*, Vol. xxvi.)

10. Engelmann and von Sterson.—The Influence of Local Injury on the Electric Irritability of Muscles. (Pflüger's *Archiv*, Oct. 1881.)

11. MARTIN and SEDGWICK.—The Mean Pressure and the Characters of the Pulse-Wave in the Coronary Arteries of the Heart. (*Jour. of Phys.*, 1882.)

12. SEWALL.—The Polar Effects of Weak Induction-Currents on Nerves. (*Jour. of Phys.*, 1882.)

13. GUÉRIN.—The Contractility of Tendons. (*Acad. des Sciences de Paris.*)

14. SECRÉTAN.—The Friction-Sound of the Knee-Joint.

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1. *Tappeiner on Absorption in the Stomach.*—H. Tappeiner (*Zeitschr. für Biol.*, Band xvi, s. 497) ligatured the pylorus of fasting cats and dogs, and introduced by the stomach-tube solutions of substances capable of easy quantitative estimation. In one experiment upon a dog, after three hours and a half, 1.63 grammes out of 1.73 grammes of grape-sugar were recovered; of 0.568 grammes of sulphate of soda, 0.477 were found; in another experiment on a cat, after three hours, of 1.28 grammes of grape-sugar, 1.25 were recovered; and, of 0.670 gramme of taurin, 0.594 gramme remained. Peptone, also, was very slightly absorbed; of 10.7 grammes introduced, 9.6 were not absorbed. Strychnia produced its effects very slightly when the pylorus was ligatured; but the results were very different when weak alcoholic solutions were substituted for watery solutions. A cat, weighing 2 kilogrammes, with ligatured pylorus, died ten minutes after the introduction of 0.04 gramme of strychnia, dissolved in 5 cubic centimètres of a 90 per cent. alcoholic solution, and 15 cubic centimètres of water, while another weighing the same lived three hours after 0.1 gramme of strychnia dissolved in 70 cubic centimètres of water. Subsequent experiments were modified by obstructing the pylorus with an India-rubber air-pad instead of the ligature. While 6.5 grammes of chloral-hydrate in water caused deep sleep in ten minutes if the pylorus were open, the same or a larger dose proved without effect when it was closed. Alcoholic solutions of chloral-hydrate acted as quickly, but not constantly, when the pylorus was shut as when it was open. Watery solutions of grape-sugar were not absorbed at all; alcoholic solutions only a little. Two-thirds of the alcohol itself disappeared by absorption.

2. *Dumontpallier on Hypnotism.*—M. Dumontpallier (*Le Progrès Méd.*, No. 2, p. 25) has observed in some cases of hysteria during the hypnotic sleep, such excessive muscular excitability, that when one end of an India-rubber tube, 5 or 6 mètres in length and 1 centimètre in diameter, was applied over a muscle of the lower extremity while the other was connected with a watch beating the seconds, each beat of the watch provoked a faint muscular contraction. The telephone produced similar results; and, if a microphone were introduced into the circuit, artificial light, or simply looking at this instrument, caused muscular contraction.

3. *Seegen on the Action of the Liver on Peptone.*—Seegen (Pflüger's *Arch.*, Band xxv, p. 165) has investigated the action of the liver on peptone, to see whether it could split up the latter into sugar or other hydrocarbons. Broken up liver was mixed with peptone solution, and kept at a temperature of 62 deg. Cent. (143.6 Fahr.) for from one to ninety-six hours, and the result controlled by another experiment in which distilled water took the place of the peptone solution. He found that there was a large increase of sugar and hydrocarbon when peptone was present, much greater than when only distilled water was used. By prolonged digestion, the sugar disappeared with production of acids. Other organs—kidney, lung, and spleen—did not show this action on peptone.

4. *Senator on the Renal Secretion.*—Senator (*Verhandl. der Physiol. Gesellsch. zu Berlin*, Jahrg. 1881-2, No. 6) has recently reviewed the various theories which have been put forward during the last few years with respect to the share taken by the various parts of the apparatus in the kidney for separating the different elements of the urinary secretion. His conclusion affirms those views which have found general acceptance in this country. He believes that the blood-pressure determines the rate of secretion from both the Malpighian tufts and the epithelium of the tubules. He regards the process in the Malpighian body as one of simple filtration, and rejects the view that the epithelium covering the tuft acts as a secreting parenchyma. He thinks we must admit that some water is secreted, together with the salts, by the epithelium of the convoluted tubules. A certain amount of albumen may be present accidentally as a transudate through the walls of the Malpighian tuft. He thinks the following factors determine its presence; the condition, especially the thickness of the membrane, the concentration of the solution (*i.e.*, the blood), its saline contents, its temperature, and the filtration-pressure. The urine, according to Senator, is a mixed solution, the result of, in part, transudation from the blood-vessels, in part of secretion by the glandular epithelium of the kidney. ROBERT SAUNDBY, M.D.

5. *Jaeger on the Body-Temperature of Healthy Individuals.*—This writer details (*Deutsch. Archiv für Klin. Med.*, Band xxix, Heft 5 and 6) the results of certain comparative experiments made by him on the temperature of individuals labouring and resting throughout the day. For the first, he employed soldiers engaged in a regimental bakery from 4 A.M. to 4 P.M.; and, for the second, soldiers lying in bed at perfect rest. In both cases, the rectal temperature was taken every two hours throughout the day. The daily mean for the resting soldiers lay between 99.2 deg. Fahr. and 98.5 deg. Fahr., the average being 98.8 deg. Fahr. The daily mean for the labouring soldiers lay between 99.5 deg. Fahr., and 98.6 deg. Fahr., the average being 99 deg. Fahr. The two averages, therefore, tally very closely. This, however, is not by any means the case when we compare the daily oscillations in the two classes. The difference between the highest and lowest temperatures was, in the case of the resting soldiers, from 1.3 deg. Fahr., to 2.5. deg. Fahr, and on an average 2.2 deg. Fahr. The difference in the case of the labouring soldiers was from 3.4. deg. Fahr. to 5 deg. Fahr., and on an average 4.7 deg. Fahr., that is, the oscillations above and below the normal were very much greater in the labouring soldiers. The highest temperature in a healthy resting soldier was 100.2 deg. Fahr., the lowest 97.2 deg. Fahr. In all the labouring soldiers, on the other hand, the rectal temperature rose during labour to 100.4 deg. Fahr., and over. The highest temperature observed in a healthy labouring soldier (during labour) was 101.1 deg. Fahr., the lowest temperature in a healthy labouring soldier (during the interval free from labour) was 96 deg. Fahr. There is thus, in labouring individuals, a compensation, so that the average temperature is very nearly that of resting individuals. JAMES ANDERSON, M.D.

6. *Prudden on the Transplantation of Cartilage.*—Dr. T. Mitchell Prudden, director of the physiological and pathological laboratory of the Alumni As-

sociation of the College of Physicians and Surgeons of New York, has recently made some experimental studies on the transplantation of cartilage, which are published in the *American Jour. of Med. Sciences* for Oct. 1881. This paper is illustrated by drawings from microscopic sections of the prepared tissue, and forms an instructive and valuable contribution towards the solution of the question of the origin and life-history of animal cells. Dr. Prudden has found, as a result of his experiments, that in the rabbit the cells of pieces of cartilage, transplanted alive, may live on unchanged in their new situation for many months; or that they may lead to the new formation of embryonal cartilage; or that they may, on absorption of the basement-substance, change their shape and size; or that they may undergo active proliferation, and take part directly in the formation of young forms of connective tissue, similar to those produced by cells from other sources. He finds, also, that pieces of cartilage, in which the cells are killed before transplantation, may be entirely absorbed by means of cells and blood-vessels from the young connective tissue which encapsules them; and that this same process of external absorption occurs hand in hand with the internal absorption in fragments whose cells are transplanted alive.

7. *Luchsinger on the Venous Pulsations in the Membrane of the Bat's Wing.*—The author shows (Pflüger's *Archiv*, vol. xxvi, p. 445) that the rhythmic pulsations of the veins of the bat's wing continue after section of the brachial plexus, of the nerves of the wrist-joint, and of all the tissues, with the exception of the vessels, these having been treated with ammonia in order to interrupt any possible communication of the nerves with the centres. The pulsations are, therefore, assuredly of peripheral mechanism. After simple amputation of the wing, the pulsation still continued for a short time; after amputation below a ligature in order to confine blood in the vessels, pulsation continued longer, ten to fifteen minutes. With artificial circulation of defibrinated blood, venous pulsations continued in the amputated limb for as long as twenty hours, and the author shows that in this case, as in that of the heart and ureter, the intravascular fluid must be under pressure to produce contractions, as if mechanical extension were the excitant of the contractile wall. These experiments constitute a peremptory proof of the local nature of the rhythm; but they leave untouched the question of its dependence on ganglia or peripheral centres.

8. *Spillman and Luchsinger on the Action of Atropia on Smooth Muscular Tissue.*—According to the authors (Pflüger's *Archiv*, vol. xxvi, p. 459), atropia acts on smooth muscles (œsophagus of birds; lower fourth of œsophagus of cats), and not on striped muscle (œsophagus of rabbits; upper three-fourths of œsophagus of cats). From these facts, added to the absence of dilatation by atropia in the striped-muscle irides of birds and reptiles, the authors conclude, in contradiction of Von Bezold's opinion, that atropia acts selectively on intrinsic ganglia, and that the drug is a specific poison towards smooth muscle fibres or the nerve-terminations therein.

9. *Lewascheff on the Relation of the Peripheric Vaso-Motor Centres to Temperature.*—The author (Pflüger's *Archiv*, vol. xxvi, p. 60) subjects to renewed experimental inquiry the contradictory statements regarding the action of heat and cold on the vessels. According to most observers, the primary effect of cold is constriction, that of warmth dilatation. According to the later observations of Dziedzjul, the reverse is the case, namely, constriction in a medium above 15 deg. Cent. (59 deg. Fahr.), dilatation below 15 deg. The author experimented upon amputated limbs of dogs, in which an artificial circulation of defibrinated blood was maintained. Nerves and muscles then remained excitable at the end of eight to ten hours, during which period spontaneous contractions were occasionally observed; he judged of the calibre of the vessels by pressure, by rapidity of outflow, and by temperature. He comes to the conclusion that increase of temperature causes dilatation, diminution of temperature, and constriction; and that the greater the increase, the greater the dilatation, and the greater the diminution the greater the constriction. These results did not obtain with dead limbs, and the changes were, therefore, due to vital activity of the arterial walls. In order to determine the share in the changes of vaso-motor fibres and centres, the author experimented on limbs of which the nerves had been cut a month previously to ensure their complete degeneration; the changes were as before. Seeing that Samkovy and Gruenhagen (*Archiv*, 1874, p. 399; and 1879, p. 165) have shown that smooth muscle relaxes with diminution of temperature, and contracts with increase of temperature, the author attributes the above changes to peripheral centres, and not to direct action on the arterial muscle.

10. *Engelmann and Von Sterson on the Influence of Local Injury on the Electric Irritability of Muscles.*—Biedermann (*Wien. Akad. Sitzungsber*, vol. lxxix, p. 289) showed that the sartorius of a curarised uninjured frog reacts first at closure, when the current is descending, at opening when it is ascending; and that this depends upon the smaller sectional area of the lower than of the upper end, and consequent greater current density where the descending current leaves and where the ascending current enters the muscle. He also showed (vol. lxxx, p. 367) that the electrical excitability of curarised muscle is much diminished by local injury; if one end of the sartorius be killed by mechanical, thermic, electrical, or chemical agency, the excitability is diminished to closure when the current leaves by the injured end; to opening, when the current enters by that end. These facts afford an additional and striking proof of Pflüger's polar law, that closure excitation takes place at the cathode, opening excitation at the anode, the above changes being due to diminished excitability near the injured point. Engelmann (Pflüger's *Archiv*, Oct. 1881, p. 97) shows that the same phenomena hold good in the case of the heart. His experiments show that the contractions of the cardiac muscle, excited by closure of a current, always start from the point where the current passes from living tissue into bounding medium, viz., at the cathode, whether that bounding medium be tissue killed by injury or any other conductor. He finds that immediately after an injury to the heart-substance, the excitability is much diminished to closure of a current leaving the heart at that part, whereas a current in the opposite direction has the same effect as before injury. He attributes the diminution of excitability to shock of the still living substance contiguous with dead substance, and finds that the diminution is followed by gradual recovery of excitability, which he attributes to death of the weakened substance, and consequent cathodic excitation in substance further from the injury. He considers that the cells composing the muscle-substance,

though in life associated so that the process of excitation is transmitted from one to the other, are independent in their death; each can die by itself, though each cannot live by itself. It is thus possible that when cells are dying, the cathode is at a weak living part; whereas, when these cells are dead, there is a new demarcation surface between living part and medium, and the cathode is at a comparatively normal part. He has followed the development of this demarcation by the galvanometer; the apparent negativity of the injured, in relation to an uninjured, point progressively diminishes with the development of the demarcation. The author now finds that the course of this diminution of negativity is nearly parallel with the re-establishment of excitability; the observed excitability is always equivalent to the maximum excitability at any point of the injured surface, whereas the observed negativity of the surface is the mean of the negativity of every point. He finds, correspondingly, that the excitability recovers its maximum sooner than the negativity of the cut surface reaches its maximum. These experiments bring new evidence in favour of the idio-muscular excitability of the heart, and of the absence of motor nerves in the heart's apex, since we have evidently to deal with direct muscular excitation, otherwise the heart ought to behave like any other nerved muscle and contract *in toto*, whether the outlet of current were weakened or not. Curarised sartorius differs from the heart-muscle in that the local excitability, depressed by injury, does not recover, the process of dying progressing from the injured point throughout the fibre, so that the cathode is always at a boundary between dead and dying, but still irritable muscle. The sartorius, subcutaneously divided, and so left to the repairing influence of circulation and innervation, recovers its original excitability. Break of a galvanic current brings about far less certain results than does the make. The author finds (in contradiction to Biedermann) that the excitability to break of a current, which enters at the injured part, is temporarily increased with curarised sartorius, as with the apex of the ventricle.

11. *Martin and Sedgwick on the Mean Pressure and the Characters of the Pulse-Wave in the Coronary Arteries of the Heart.*—This paper (*Jour. of Physiol.*, 1882, p. 165) gives an account of experiments undertaken in order to test the theory of Thebesius, a theory which has been independently propounded by Brücke and by Garrod, that the aortic semilunar valves cover the mouths of the coronary arteries during systole; so that the blood can enter these vessels only during the ventricular diastole, although it is admitted that the jet of blood from a cut coronary artery is synchronous with systole. Using the graphic method, the authors obtained simultaneous tracings of the carotid and coronary pulsations, which show that the pressure-waves in the two arteries are synchronous, any modification of the carotid pressure (as by dyspnœa) being accurately reproduced on the coronary tracing. The pressure in the latter vessel, as in the former, depends, therefore, on the aortic pressure, without being, as Brücke supposed, obstructed during systole by the semilunar valves.

12. *Sewall on the Polar Effects upon Nerves of Weak Induction-Currents.*—The author (*Jour. of Physiol.*, 1882, p. 175) examines, on 'nerve-muscle' preparations, the influence of a very weak induction-current (insufficient to contraction) upon the excitatory effect of a simultaneous submaximal induction-current passing through a separate pair of electrodes. The analysis of his statements shows that the excitatory effect of the efficient current (which proceeds from the cathode) is increased when that cathode is in the neighbourhood of the cathode of the inefficient current, diminished when it is in the neighbourhood of the anode of the same current. These modifications, obtained whether the 'efficient' electrodes be above or below the 'inefficient', were more pronounced the shorter the distance between the 'exciting' and 'modifying' electrode, and failed entirely with a time-interval between the two currents of 0.001 second. A. WALLER, M.D.

13. *Guérin on the Contractility of Tendons.*—M. Jules Guérin in 1856, in a memoir presented to the Academy of Sciences in Paris, attempted to prove that tendons are contractile. At a recent meeting of the Academy, he asserted that tendinous contraction belongs to the same order of phenomena as muscular contraction. Muscular contraction is both voluntary and involuntary: tendons possess identical properties. M. Guérin says that tendons appear to be only the prolongation of muscles, but, considered anatomically, they are the result of muscular fibres closely pressed together. M. Flourens has demonstrated the existence of nervous sensibility. M. Pappenheim in 1861, and M. Sappey in 1866, discovered the presence of nerves in tendons. M. Guérin believes them to be the prolongations of muscular nerves. M. Guérin reserves for a future memoir the definition of the true character of involuntary tendinous contraction, which, generally placed in the category of reflex movements, was described by M. Guérin in his original memoir as *contraction de résistance.*

14. *Secrétan on the Friction-Sound of the Knee-Joint.*—M. Secrétan, in a recent note read at the Biological Society of Paris on the 'Frottement de l'Articulation du Genou', stated that a crackling noise or friction-fremitus is heard in the knee-joint in its normal condition, comparable to that of chronic arthritis at its onset, or of pleurisy. This is indicated by a crepitus easily provoked by the following means. The legs are crossed and flexed; the upper leg hangs down, and is slowly lifted up, the patella at the same time being grasped by the other hand. When the limb is in a position of semi-flexion, the posterior face of the patella is in direct contact with the femoral pulley, and the friction-fremitus is very distinctly heard. W. VIGNAL.

NEUROLOGY.

RECENT PAPERS.

1. TURNBULL.—General Paralysis at the Age of Twelve. (*Jour. of Men. Science*, Oct. 1881.)

2. SIEMENS.—Ergot in Epilepsy and Insanity. (*Archiv. für Psychiatrie und Nervenkrankh.*)

3. SÉGUIN.—Early Diagnosis of some Organic Diseases of the Nervous System. (*New York Med. Rec.*, 1881.)

4. GIRMA. — Hallucinations in General Paralysis. (*Thèse de Paris*; and *Gaz. Méd. de Paris.*)

5. SINKLER.—Chorea in the Aged. (*Jour. of Nervous and Mental Dis.*, July 1881.)

6. CHARCOT.—Paralysis Agitans and Senile Trembling: Static Electricity in Hysteria. (*Jour. de Méd. et de Chir. Prat.*, Oct. 1881.)

7. CAVAFY.—Nerve-Stretching in Locomotor Ataxy. (*Brit. Med. Jour.*, Dec. 1881.)

8. MÜLLER and EBNER.—Nerve-Stretching in Peripheral and Central Lesions. (*Wiener Klinik*, vii Jahrgang, Heft 7.)

1. *Turnbull on a Case of General Paralysis at the age of Twelve.*—Dr. A. R. Turnbull (*Journ. of Men. Science*, Oct. 1881) reports a case of general paralysis in a boy at the early age of twelve years. The mental symptoms consisted of loss of memory, but there were no delusions, no excitement, no depression, and no exaltation, except that the feeling of *bien être* was well marked. The boy was stout but flabby, and undersized, looking younger than his real age, which was eighteen on admission. There were very distinct motor symptoms. The articulation was defective. There were tremors of the tongue and lips; the pupils were much dilated, irregular in outline, and very sluggish in their action under light. The patient had, up to the age of ten, been healthy, and was regarded as being above the average in intelligence. At ten years of age he had an attack of hemiplegia, which passed off in about a week. His relatives observed that this left a certain amount of stupidity behind. From the age of twelve the mental weakness was observed to increase gradually but distinctly, and continued to become more and more marked until his admission to the asylum. The patient ultimately died on Dec. 23, 1879, the *post mortem* appearances fully corroborating the diagnosis made during life. A few months after the death of the son, the father was admitted to the asylum, and, in his case also, the disease proved to be general paralysis. The patient's mother had an epileptiform attack before one of her confinements. Dr. Turnbull remarks that this case is unique, in being one of general paralysis at an earlier age than any previously published instances on record. Dr. Clouston has reported one at sixteen, Guislain one at seventeen, and another has been recorded at the Royal Edinburgh Asylum at twenty. The influence of heredity in the development of this disease is still a much disputed point. In this case, the father died of general paralysis after the son had died from the same disorder. Did the influences which produced the disorder in the father occur sufficiently early in his life to affect his offspring? Statistics vary greatly on this point. The Commissioners in Lunacy, in their Report for 1878, estimate hereditary influence at 8.4, whilst Dr. Grainger puts it as high as 47.6, Dr. Macdonald at 36, and the Royal Edinburgh Asylum case-books at 40.7. [The reporter has had under his care an idiot born from a general paralytic, and also a case of hysterical mania, whose father died of general paralysis.—*Rep.*] A third point of great interest in this case is the history of an attack of hemiplegia at ten, the mental symptoms not appearing till the age of twelve. [In the last case of general paralysis in which the reporter was consulted, there had been an attack of hemiplegia five years before the mental symptoms were manifested. The relations, and even the family medical attendant, were much surprised on being informed that the disease was general paralysis, saying, 'Oh, yes, he *was* paralysed before (referring to the hemiplegia), but he is surely not so now'. This illustrates the necessity for teaching that much-neglected branch of medicine—psychology—more thoroughly in our medical schools, which might possibly prevent the confusion often existing in the medical mind between progressive muscular atrophy and general paralysis of the insane.—*Rep.*]

H. Sutherland, M.D.

2. *Siemens on Ergot in Epilepsy and Insanity.*—In the *Chicago Med. Review*, Sept. 1881, it is remarked that it is rarely that an *à priori* notion in medicine receives such a powerful confirmation by clinical experience, as has been recently given to the suggestion of ergot as a remedy in insanity, by the observations of a German alienist. Dr. Siemens (*Archiv für Psychiatrie und Nervenkrankheiten*) describes several cases of mental disturbance resulting from the accidental ingestion of ergot in rye-bread. The chief symptoms were: pupils greatly dilated, occasionally unequal, apathy, fits of sudden excitement with violent tendencies, genuine epileptic attacks, preceded by a short aura of teeth-chattering and yawning; the convulsive stage, accompanied by complete unconsciousness, lasted about fifteen minutes and less. After the attacks, the mental state was worse than it was before them. In one case, the so-called psychical equivalent of Samt took the place of the convulsions. One of the ten patients died in a cataleptic condition, the others recovered spontaneously, for bromides administered did not exert the slightest influence on the attacks. It seems from these observations, and they are confirmed by older ones less accurately made, that ergot in over-doses is capable of producing a true epilepsy as it were, even to the extent of provoking the epileptic mental states. Many years ago Echeverria recommended the combination of ergot and conium with the bromides, in the treatment of obstinate cases of epilepsy. The theory of the administration of the former drug was not clearly expressed by him, but he appeared to have in view a presumed tendency to cerebral congestion. The neurological editor of the *Review* has for some years (*Physician and Pharmacist*, August 1879) given ergot, both in combination and alone, for epilepsy, on an entirely different theory, one which seems to harmonise more with the facts observed by Siemens. Ergot produces cerebral anæmia, with a relative hyperæmia of the lower centres of the isthmus. Exactly the same phenomenon occurs in the initial stage of the epileptic attack. It is therefore proper to assume that in epilepsy there is an excessive excitability of the same vaso-motor centre which is subject to the influence of ergot. Now, frequent excitation diminishes the excitability of a centre under certain circumstances. The theory as to the action of ergot upon the epileptic attack is, in consequence, that, administered in doses varying for each patient between the wide limit of five drops to four grammes of the fluid extract, at intervals graded according to the frequency of the epileptic attack, the drug produces a lesser degree of the same condition which constitutes the epileptic attack, and that, by a series of artificial slight discharges, the full discharge of the epileptic attack is anticipated.

3. *Seguin on the Early Diagnosis of some Organic Diseases of the Nervous System.*— Certain symptoms are given (*New York Med. Record*, 1881), by attention to which a comparatively early diagnosis may, in the author's opinion, be made in three diseases.—1. *Locomotor ataxy* should be diagnosed before the ataxic period by the peculiar pains, by the abolition of certain reflex actions—chiefly that of the pupil to light and the tendon-reflexes; and by the occurrence of paralysis of the ocular muscle. 2. *Paralytic dementia* may be foretold by tremors or fibrillary contractions in certain groups of muscles—specially those of the tongue, face, and arm; by a tremulous, thick, and vibrating speech; by inequality of the pupils; and by dementia, which often precedes the paralysis. 3. *Tumour of the brain* seated anywhere in the motor area is indicated by localised

spasm, which after a time may pass into hemiplegic epilepsy, and is frequently followed by localised paralysis, neuro-retinitis or choked disc, and localised headache.

4. *Girma on Hallucinations in General Paralysis.*—The existence of hallucinations in general paralysis is still one of the most disputed questions in mental pathology. Some authors—a *résumé* of whose opinions has been given by Dr. Fournier in his article on Alcoholism in the *Dict. de Méd. et de Chir. Prat.*—think that hallucinations are never positively present in general paralysis. Others, such as M. Achille Foville, are certain that, on the contrary, they are almost constantly observed. Between these extreme opinions are those who hold that, though hallucination in general paralysis is not a frequent and important symptom, it does, nevertheless, exist in certain cases. M. Girma (*Thèse de Paris*, 1881, and *Gaz. Méd. de Paris*) has in view the opinion of M. Foville. The following are the author's conclusions. 'Hallucinations are very frequent in general paralysis. They may be observed in all stages of the disease, but particularly in the period of dementia. In the first period they may have a psychical character, with attacks of epileptic or apoplectic cerebral congestion, which seem to have a marked influence on their production; they are rather psycho-sensorial. In a general way, all the senses are capable of being affected simultaneously or successively. Fleeting and variable in their forms, the hallucinations may be often persistent and identical in depressive forms during incomplete remissions of dementia. They sometimes are the cause of impulsive acts; but it is rare that they, like simple hallucinations, are the starting-point of systematic delirium. In a number of cases, they have been only the revival of old normal sensations. Finally, in general paralytics affected previously with alcoholism, hallucinations due to this influence must not be confounded with those which are produced under the influence of general paralysis.' The reporter in the *Gazette Médicale* says: 'The thesis of M. Girma is an excellent clinical study, commencing by some general considerations on hallucinations and historical *résumé* of the question of hallucinations in general paralysis. It is supported by numerous personal observations, which are well chosen and generally very interesting. We only wish that the author, instead of confining himself to the reproduction of facts such as he has observed them, had entered further into the subject by analysing these facts, commenting on them and comparing them with other similar or contrary facts. This work of analysis and scientific discussion on a question so much disputed, would have given more weight to an opinion so accurately stated.'

5. *Sinkler on Chorea in the Aged.*—Dr. Wharton Sinkler (*Journ. of Nerv. and Ment. Dis.*, July 1881) believes this disease is not so rare in the old as is commonly supposed. It is often mistaken for senile trembling or paralysis agitans. He relates two striking examples in a male and female, aged 86 and 82 respectively. One recovered in a few months, the other remained the same after two and a half years. There was no dementia in either case. Organic heart-disease was present in both. The disease resembles that of childhood, but the movements are less violent and varied. Senile trembling is generally confined to the head, and is a continuous tremor; in paralysis agitans, the tremor is slight at first and under control, generally increasing in extent and violence, with loss of power in the parts. The tremor of sclerosis occurs during voluntary effort, and is connected with loss of muscular power.

6. *Charcot on Paralysis Agitans and Senile Trembling: Static Electricity in Hysteria.*—A *résumé* of lectures by Professor Charcot, delivered at the Salpêtrière, on the above subjects, is published in the *Jour. de Méd. et de Chir. Pratiques*, Oct. 1881. He dwells particularly upon the characteristic symptoms of paralysis agitans other than the tremors, which latter may often be completely absent. He alludes to the peculiar attitude of the patient, whose body is bent forward, while his neck is rigid and his head almost immovable. This rigidity is due to a constant muscular contracture, which affects the flexors first, and always to a more marked degree than the extensors. The facial expression, described as that of surprise, is referred to a contracture of the occipito-frontalis and of the orbicularis palpebrarum. The contracture of the ocular muscles imparts a staring look to the eyes. A similar interference with the function of the laryngeal muscles produces an impairment of speech, which may be interrupted or stammering. The muscular rigidity sometimes causes deformities resembling those of chronic rheumatism, but distinguished by the absence of arthritic swelling, rigidity, and crepitation. The patients experience an indescribable *malaise*, which impels them to incessantly change their position. This abnormal sensation is most marked at night. Although the temperature of the patients remains normal, they suffer from a subjective feeling of intense heat, which is particularly felt on the back and in the epigastrium. M. Charcot emphasises the fact that true senile trembling is a rare affection. He asserts that most of the cases of tremor designated by this name were really developed at an earlier age. Senile trembling often localises itself in isolated muscular groups, causing inco-ordination in the movements of the head and of the extremities. No treatment is efficacious in these diseases. The same observer has attained remarkable results in the treatment of hysteria by means of static electricity. His apparatus is essentially such a static machine as is used in physical laboratories, although somewhat modified. The patients are placed upon isolated stools, connected with the conductor, and thus subjected to the uninterrupted action of electric currents, which, escaping from prominent points of their bodies, produce prickling and tingling. The appetite is increased, and the cutaneous functions stimulated. Special dischargers are provided for the excitation of individual organs, particularly those of special sense. Hysterical contractions, hemianæsthesia, and achromatopsy were completely relieved by the electric bath. Anæsthesia is often permanently, but sometimes only temporarily removed. On the whole, M. Charcot believes static electricity to be more efficacious than the other forms of electricity in restoring the sensibility of anæsthetic parts, and in diminishing the tendency to attacks of hysterical anæsthesia.

7. *Cavafy on Nerve-Stretching in Locomotor Ataxy.*—Dr. John Cavafy, in the *Brit. Med. Jour.*, Dec. 1881, pp. 928, 973, gives details of eighteen cases in which this operation has been carried out with greater or less satisfactory results. The mode in which the operation acts is still *sub judice;* but, so far as we at present know, forcible extension of a nerve is only followed by temporary paralysis, and the operation seems to act on the spinal cord, as well as upon the nerve itself.

8. *Müller and Ebner on Nerve-Stretching in Peripheral and Central Lesions, especially in Tabes Dorsalis.*—These writers give a full account (*Wiener Klinik*, vii Jahrgang, Heft 7) of the literature of this subject, and then record two new cases in which the favourable results, following immediately on the operation, justify them, as they consider, in recommending this operation in the strongest possible way. The interval that had elapsed since the operation was short, but the results seem at least to show that the central pathological changes need not necessarily be the only or even the direct causes of the functional disturbances. J. Anderson, M.D.

DISEASES OF THE THROAT.

RECENT PAPERS.

1. Major.—Phonation on Inspiration a Cause of Hysterical Aphonia. (*Archives of Laryng.*, Jan. 1882.)
2. Roe.—Laryngeal Whistling. (*Ibid.*)
3. Morgan.—Diphthonia or Double Voice. (*Ibid.*)
4. Sejous.—A Case of Abductor Paralysis due to Lead-Poisoning. (*Ibid.*)
5. Glasgow.—On a Paralysis of the Crico-Arytænoideus Posticus Muscle. (*Ibid.*)
6. Kiesbacher.—A Case of Spasm of the Glottis. (*Memorab.*, 1881, No. 3; *Deutsche Medicin. Zeit.*, No. 27.)
7. Rossbach.—Electrisation of the Laryngeal Muscles and Nerves through the Skin. (*Monats. für Ohrenh.*, Oct. 1881.)
8. Cohen.—A Case of Prolapse of the Laryngeal Sac. (*Archives of Laryng.*, Jan. 1882.)
9. Elsberg.—A Case of Eversion and Prolapse of both Laryngeal Sacs. (*Ibid.*)
10. Coupard.—Fibro-Sarcoma implanted on the Right Posterior Crico-Arytenoid Region; Extraction with the Galvano-Cautery. (*Revue Mensuelle de Laryng.*, Feb. 1882.)
11. Schaeffer.—Operations on Polypi of the Larynx by means of a Sponge (Voltolini's method). (*Monats. für Ohrenh.*, No. 3, 1881.)
12. Langmaid.—Tracheal Tumour resulting from Tracheotomy. (*Archives of Laryng.*, Jan. 1882.)
13. Wundelschmidt.—Temporary Anchylosis of the two Crico-Arytenoid Articulations in Acute Synovial Polyarthritis. (*Monats. für Ohrenh.*, No. 10, 1881.)
14. Whipham.—Foreign Body in the Larynx. (*The Specialist*, Dec. 1, 1881.)
15. Gleitsmann.—A Case of Membranous Syphilitic Stenosis of the Trachea. (*Archives of Laryng.*, Jan. 1, 1882.)
16. Albertis.—The Difference between Diphtheritic and Inflammatory False Membranes. (*Bollet. delle Scienze Mediche*, July 1881; *Gaz. Méd. de Paris*, Nov. 5, 1881.)
17. Hemming.—Cases demonstrating the value of the Laryngoscope as a means of Diagnosis and Treatment. (*The Specialist*, Dec. 1, 1881.)
18. Prince.—Is Acute Follicular Tonsillitis a Constitutional Disease? (*Boston Med. and Surg. Jour.*, Feb. 2, 1882.)
19. Lefferts.—The Question of Hæmorrhage after Tonsillotomy. (*Archives of Laryng.*, Jan. 1882.)
20. Weil.—Retropharyngeal Abscess. (*Monats. für Ohrenh.*, 1881, 3.)
21. Kudlich.—Large Naso-pharyngeal Polypus in a Child four years old. (*New York Med. Rec.*, Nov. 12, 1881.)
22. Gottstein.—Idiosyncratic Asthma. (*Bresl. Aerztl., Zeitsch.*, No. 15, 1881.)
23. Roth.—Epistaxis Endangering Life. (*Memorab.*, Heft 5, 1881.)
24. Glasgow.—Operation for the Rectification of a Deflection of the Nasal Septum. (*Archives of Laryng.*, Jan. 1882.)
25. Lefferts.—Cases of Rare Congenital Deformity of the Posterior Nares and Throat. (*Phil. Med. News*, Jan. 7, 1882.)
26. Brandus.—Complete Occlusion of the Left Side of the Nose. (*New York Med. Rec.*, Nov. 12, 1881.)
27. Little.—Hypertrophy of the Right Side of the Nose. (*New York Med. Rec.*, Nov. 26, 1881.)
28. Seiler.—The Effect of the Nasal Cavity upon the Voice and Articulate Speech. (*Archives of Laryng.*, Jan. 1882.)

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1. *Major on Phonation on Inspiration a cause of Hysterical Aphonia.*—Dr. Major thinks that many cases of hysterical aphonia may be attributed to faulty respiration. He quotes the case of a lady (*Arch. of Laryng.*, Jan. 1882) in whom aphonia had come on six weeks after a severe cold. Hysterical symptoms were prominent. Electricity was applied without benefit for several months. With the laryngoscope, there was nothing abnormal to be seen except a spasmodic contraction of the larynx when attempts were made to phonate. Dr. Major suspected her of involuntarily holding her breath when directed to phonate, and, without letting her know his object, proceeded, by daily training, to teach her how to breathe and phonate on expiration. After some weeks of such exercise, the spasm had very markedly lessened, the vocal bands became more and more under control, and simple sounds, then words and sentences, were gradually acquired. Dr. Major questions if many cases of ordinary stuttering may not be due to the same cause.

2. *Roe on Laryngeal Whistling.*—The author records a case (*Arch. of Laryng.*, Jan. 1, 1882) of a young lady who could whistle with the lower part of the throat at will, without the aid of her lips or any portion of the mouth. The laryngoscope showed that the fundamental tones were produced by the vibrations of the edges of the vocal cords, and the modulations of the tones by the minute adjustment of the ventricular bands which regulated the laryngeal opening above the cords. The ventricular bands also, by pressing firmly down on the vocal cords, closed the ventricles, and acted as a damper in preventing the cords from vibrating except for about the middle third of their length. This sphincter-like action corresponds with the position which Mr. Gordon Holmes believes the larynx to assume in the production of the falsetto notes. As the patient, previously to the coming on of the mild laryngitis for which she was under treatment, had possessed some ventriloquial powers, Dr. Roe, to ascertain if the whistling were due to the same cause, examined the larynx of a professional ventriloquist. He found that in this person it assumed exactly the same shape; and, although he was unable to produce a laryngeal whistle himself, he told Dr. Roe of two other ventriloquists who could whistle very loudly with the larynx alone. Dr. Roe infers that the ventriloquial power is due to the ability of modulating the tones of the larynx with little or no assistance of the organs above, except to deflect or 'throw' the voice.

3. *Morgan on Diphthonia or Double Voice.*—In his paper (*Arch. of Laryng.*, Jan. 1, 1882) on diphthonia or double voice, which he defines as the simultaneous production of two tones differing in pitch during phonation, Dr. Morgan does not attempt to add any new theories to those already familiar to laryngologists, but deals rather with

the practical bearing of the subject by collecting the experiences and observations of others. He also adds a case which has recently fallen under his own observation. A boy, aged 19, suffered from chronic laryngeal catarrh. When he sounded '*a*', it was seen with the laryngoscope that the cords did not touch each other in all their length, but only for two millimètres at their middle part. At the same moment Dr. Morgan could hear a distinct diphthonia, consisting of an ordinary '*a*' sound, followed by a well-marked falsetto, which imparted to the voice an agreeable and musical tone. There were, in fact, two glottic orifices, an anterior enclosed by the bands, and a posterior extending from near the vocal processes backward. The sound in the 'cord-glottis' would be high, that in the 'cartilage-glottis' low, from the fact that the vibration of the cartilaginous portion is less rapid than the vibration of the ligamentous portion. The symptom of diphthonia entirely disappeared after a few months treatment, directed to the removal of the catarrh and the consequent paresia.

4. *Sejous on a Case of Abductor Paralysis due to Lead-Poisoning.*—The patient, a painter (*Arch. of Laryng.*, Jan. 1, 1882), suffered from difficulty of breathing, sensation of constriction in the throat, hoarseness, and inability to produce the lower tones. There was congestion of the pharyngo-laryngeal cavity. On inspiration, the vocal cords were separated by a slit only a line and a half in width, and were approximated when a sound was emitted, vibrating to all appearances normally. The patient had had lead-colic twice, and had been using white paint five weeks before. Sulphate of magnesia and iodide of potassium, followed by tincture of nux vomica, were administered, and cure resulted in nine weeks.

5. *Glasgow on a Paralysis of the Crico-Arytænoideus Posticus Muscle.*—The author believes that the symptoms in the above case (*Archives of Laryng.*, Jan. 1882) prove that the cause of the paralysis was of central origin. The patient, who was a medical man, ascribed his first impairment of health to exposure during long rides, combined with great mental distress. He first noticed hoarseness and difficulty in breathing in 1872, after an attack of malarial fever, followed by great prostration. In 1874, after exposure to wet and cold, he suffered with sore-throat, great difficulty in swallowing, breathing, and speaking. These symptoms increased alarmingly, and were accompanied with somnolence, failing memory, and nervous and jerky movements of the limbs. In 1876, some improvement was noticed. It was at this time that Dr. Glasgow diagnosed a paralysis of the crico-arytænoidei postici muscles, the vocal cords remaining immovable in the middle line. The epiglottis was insensitive to touch, and its movements were sluggish on phonation. There was also some paralysis of the soft palate and, to a very slight extent, of the side of the face. The improvement gradually continued, until in 1881 the right cord moved in a perfectly normal manner, although the left cord was still motionless. At the time of the report the patient described himself as comparatively well. During the whole time from 1872, he had taken no medicines which could favourably influence the disease, excepting iodide of potassium, which had given him no relief.

6. *Kiesbacher on a Case of Spasms of the Glottis.*—Dr. Kiesbacher (*Memorabilien*, 1881, No. 3; *Deutsche Medicin. Zeit.*, No. 27) relates the following case. A girl had suffered from spasm of the glottis for five years, which could only be allayed by injections of morphia. The spasms first came on after typhus fever, and occurred at first at intervals of from three to eight months. They afterwards became so frequent that morphia was injected thrice daily. It was estimated that the quantity injected amounted to 180 grammes a year, or 900 grammes during the five years. Death was ultimately caused by the morphia. No reason could be assigned for the spasms.

7. *Rossbach on Electrisation of the Laryngeal Muscles and Nerves through the Skin.*—Dr. Rossbach argues from his personal experience (*Monatsch. fur Ohrenh.*, October 1881) that faradisation and galvanism of the larynx may be effected through the skin; and even with weak currents, he says, a physiological and therapeutical effect upon the muscles and nerves of the larynx may be reproduced. It follows in consequence that direct intralaryngeal electrisation is not necessary, and may be completely replaced by a sufficiently prolonged cutaneous electrisation.

8. *Cohen on a Case of Prolapse of the Laryngeal Sac.*—In a patient (*Archives of Laryng.*, Jan. 1, 1882) suffering from aphonia, which had come on after a severe spell of coughing, Dr. Cohen detected a prolapse of the laryngeal sac overhanging the right vocal cord and occluding the glottis. The absence of a line of demarcation between the ventricular band and ventricle suggested the nature of the lesion. He recommended the patient, who was a physician, to accustom himself to auto-laryngeal manipulation, and to touch the parts with sulphate of copper or some other astringent powder. Ten months later there was partial replacement of nearly the anterior half of the prolapsed wall, and the voice had returned, though hoarse. A year afterwards the voice had much improved, though the appearance of the parts had not altered.

9. *Elsberg on a Case of Eversion and Prolapse of both Laryngeal Sacs.*—The patient (*Archives of Laryng.*, vol. i, 1882), whose voice had been affected from infancy, had had four separate attacks of aphonia, lasting from one to two months, which came on without assignable cause, and passed away without special treatment. He had suffered with prolapsed rectum and hæmorrhoids for over twenty years. Two tumours, apparently issuing from the ventricles, were discovered upon the vocal bands. They were larger during respiration than during attempted phonation, and seemed to be moved with the current of air. They were pear-shaped, the small end in front; in consistence they were soft, and could be indented with a probe. They could be made to disappear in great part during respiration, by being pushed with a properly bent probe into the sacculi laryngis; and, unless made to reappear sooner by coughing, they would stay away for a time, varying from a few minutes to an hour. But the most remarkable change took place in the tumours when the larynx passed from the respiratory to the phonatory condition; for a moment they pressed against each other, then they became narrower. The diminution in breadth was not merely a compression of the two tumours against each other, but an actual sliding inside of the sacculi, so that more of the vocal bands became visible, and the tumours no longer touched each other at all. All portions of the mucous membrane were relaxed. Dr. Elsberg removed the anterior portion of the tumour on the left side (that being the larger) with cutting forceps which he had devised for the purpose. There was hardly any hæmorrhage, but a good deal of pain. A weak solution of iodide of zinc was applied.

A week later, the whole remaining tumour on the left side was removed at one sitting. The sacculus of the right side was replaced as far as possible each time Dr. Elsberg saw the patient, and persulphate of iron, iodide of zinc, or iodine, were applied to the whole of the interior of the larynx at frequent intervals. At an examination made nine weeks afterwards, there was no trace of the tumour on the left side, and only a comparatively small elevation or swelling on the right. For some years messages were received from the patient to the effect that his voice had never again failed him.

10. *Coupard on Fibro-sarcoma implanted on the right Posterior Crico-arytenoid Region: Extraction with the Galvano-Cautery.*—The patient (*Revue Mensuelle de Laryng.*, Feb. 1, 1882) had suffered for ten months from what was thought to be catarrhal pharyngitis. The last month he had become much worse, being able neither to breathe nor to swallow. On laryngoscopic examination, a huge tumour was found obstructing all the laryngeal infundibulum; it appeared to be inserted upon the superior part of the arytenoid cartilages. The voice was scarcely altered. Tracheotomy was performed. Dr. Fauvel was unable to extract the tumour with the forceps, as the blades slipped off, so that it could not be grasped. The galvano-cautery was then applied, but the wire was not thick enough and melted; a stronger wire was afterwards used, and the tumour cut through. It measured 5 centimètres in diameter and 4 in thickness, and was flattened at its edges. It consisted of fibrous tissue containing a few embryonic cells. As it appeared that the tumour had not been entirely removed, the wire was again passed round and pulled as tight as possible. As this means failed to bring more away, Dr. Fauvel turned the thread upon itself, took it out of the apparatus, and left it in its place. The next day, the rèmains of the tumour were extracted without any difficulty. When seen a year afterwards, the patient was in perfect health, without any trouble in eating or breathing.

11. *Schaeffer on Operations on Polypi of the Larynx by means of a Sponge (Voltolini's method).*—The author draws the following conclusions (*Monatsch. für Ohrenh.*, No. 3, 1881) with regard to this method. 1. The operation with the sponge is especially indicated in cases of hard and pedunculated fibroma. 2. In cases of soft papilloma and dermoid cysts, the result is not as satisfactory. 3. The proceeding may be employed, combined with the usual means of removing growths, in those tumours which have a broad base, in order to make them accessible to other instruments.

12. *Langmaid on Tracheal Tumour resulting from Tracheotomy.*—In this case (*Archives of Laryng.*, Jan. 1, 1882) tracheotomy was performed upon a child four years old for the removal of half a dried chestnut which had been drawn into the trachea. It was extracted with the forceps. The tube, which was left in to allow other fragments to escape, was removed the third day. After convalescence the voice remained a hoarse whisper, and respiration was impeded on exertion. A greyish-white tumour, probably a granulation mass, was detected with the laryngoscope, occupying one-third of the diameter of the trachea in the region of the cricoid cartilage. The tumour became steadily smaller, and at the end of four months only a sessile button remained. This was still present when the child was examined a year later.

13. *Wundelschmidt on Temporary Ankylosis of the two Crico-arytenoid Articulations in Acute Synovial Polyarthritis.*—The author (*Monatsch. für Ohrenh.*, No. 10, 1881) relates a case of immobility of the two crico-arytenoid articulations, which came on in the course of an acute attack of articular rheumatism and lasted three days.

14. *Whipham on a Foreign Body in the Larynx.*—A piece of bone of a rabbit (*The Specialist*, Dec. 1. 1881) escaped into the larynx of a man who was laughing while eating. It became so firmly lodged, that though seized with the forceps, it could not be removed. Tracheotomy was performed, and fruitless efforts made to extract it through the wound. The incision was therefore prolonged over the thyroid cartilage; and by this means the bone was taken away. It resembled in shape and size the horizontal plate, with a part of the vertical plate, of the human palate bone.

15. *Gleitsmann on a Case of Membranous Syphilitic Stenosis of the Trachea.*—The patient, aged 32, with history of syphilis (*Archives of Laryng.*, Jan. 1, 1882), suffered from complete aphonia and marked dyspnœa. The most striking feature of the laryngoscopic image was the seeming appearance of a second glottis far below the normal one. Two dark symmetrical membranes ran horizontally from back to front of the trachea, with a very small opening between them. They remained immovable during respiration and phonation. They were located in the region of the fifth and sixth tracheal cartilages. Their surface and free margin did not show any sign of ulceration. The motion of the vocal cords proper was uniform; but the glottis remained open about as wide as the false membranes below were apart from each other. Tracheotomy was not performed. After treatment with iodide of potassium and mercurial inunctions, signs of improvement were soon noticed. A month afterwards the voice had returned, the false ligaments had almost disappeared, and the difficulty in breathing was scarcely perceptible.

16. *Albertis on the Difference between Diphtheritic and Inflammatory False Membranes.*—Dr. Albertis (*Bollet. delle Scienze Mediche*, July 1881; *Gaz. Méd. de Paris*, Nov. 5, 1881), by treating non-diphtheritic false membranes with sulphuric acid, has obtained crystals which are insoluble in ether and absolute alcohol, but soluble in alkalis, and which he considers to be crystals of tyrosine. He has not obtained these crystals when subjecting diphtheritic membranes to the same treatment. He draws the following conclusions. Diphtheritic false membranes have a different chemical composition from that of inflammatory false membranes. Diphtheritic membranes do not contain aromatic constituents like tyrosine. The action exerted by sulphuric acid and microscopical examination suffice, therefore, he maintains, to establish the nature of a false membrane.

18. *Prince on the Question, Is Acute Follicular Tonsillitis a Constitutional Disease?*—To give an answer to this question, Dr. Prince contributes four cases (*Boston Med. and Surg. Jour.*, Feb. 2, 1882) as types of a large number he has met with during the past year. His conclusions are as follows. There is no constant relation between the local inflammation and the constitutional symptoms; between the local inflammation and the height of the fever; or between the height of the fever and the remaining constitutional symptoms. The fever is often so high (sometimes reaching 105 deg. Fahr.) as to be far out of proportion to the local inflammation, which may be slight. With slight fever and

slight local inflammation, there may be severe constitutional disturbances, such as headache, loss of appetite, general prostration, prolonged convalescence, etc. The disease occurs in an epidemic form, when it is undoubtedly constitutional. There are strong though not conclusive reasons for believing it to be more or less infectious. The frequency with which it occurs in hospitals is such as to be best explained on the theory of a septic action on the system. It is probably often mistaken for diphtheria, from which it differs greatly in its symptoms and course. Dr. Prince adds, that he does not maintain that every case of tonsillitis, in which the follicles are involved, is in reality a constitutional fever; but that there is a form of sore throat of common occurrence, in which the follicles and mucous membrane of the tonsils are chiefly involved, which is the localised expression of an essential fever not generally recognised.

19. *Lefferts on the Question of Hæmorrhage after Tonsillotomy.* — This question, says Dr. Lefferts (*Arch. of Laryng.*, Jan. 1, 1882), is one which is regarded from two extreme points of view. Many general practitioners dread the operation as one likely to be followed by profuse if not dangerous hæmorrhage; while the works on diseases of the throat deprecate the idea that the operation is attended by any remarkable loss of blood. The author summarises his clinical experience, based on 500 tonsillotomies, as follows: '1, a fatal hæmorrhage is very rare; 2, a dangerous hæmorrhage may occasionally occur; 3, a serious one, serious as regards both possible and immediate and remote resuts, is not very unusual; and, 4, a moderate one, requiring direct pressure and strong astringents to check it, is commonly met with.' In the majority of cases, no trouble is experienced.

20. *Weil on Retropharyngeal Abscess.*—Dr. Weil (*Monatsc. für Ohrenh.*, 1881, 3) relates a case of retropharyngeal abscess which was incised three times to allay the severe dyspnœa which was caused by it. The third incision was made sufficiently large to completely evacuate the contents, but, in spite of this, œdema of the glottis ensued, and resulted in the death of the patient. The abscess, which was situated somewhat to the left of the middle line, was considered by Dr. Weil to have been of a glandular origin, secondary to suppuration in the cavity of the tympanum.

21. *Kudlich on a Large Naso-pharyngeal Polypus in a Child four years old.*—In this case (*New York Med. Record*, Nov. 12, 1881), a large fibrous polypus grew from the lateral wall of the pharynx, and extended into the posterior nares, occasioning a purulent coryza, constitutional troubles, and dyspnœa. The tumour, which had at first been taken for a hypertrophied tonsil, was removed, and the child recovered.

22. *Gottstein on Idiosyncratic (Idiosyncraticum) Asthma.*—Dr. Gottstein contributes a case (*Bresl. Aerztl. Zeitschrift*, No. 15, 1881) of ipecacuanha asthma, which bears out the view of Fraenkel that asthmatic attacks caused by the presence of polypi, as well as those produced by the inspiration of dust-like materials, are to be explained as a reflex irritation of the sensory nerves of the nasal mucous membrane. The patient, a druggist, aged 24, had suffered for years with a chronic cold, complicated for the last two years and a half with asthmatic attacks, which came on regularly after powdering ipecacuanha. Even in preparing the small quantity of ipecacuanha requisite for a Dover's powder, the attacks were provoked. They began with a violent fit of sneezing and difficulty in getting the breath. Respiration became more and more difficult, and was accompanied by an audible whistle. The fit lasted half-an-hour, and was followed by a profuse secretion from the mucous membrane for twenty-four hours. Sometimes the fit would recur in the night. The nasal cavities appeared red, and covered with abundant mucus, which dried at the posterior nares into a scab. There was no fœtor. Although it was here evident that the ipecacuanha first affected the diseased mucous membrane, and only secondarily produced the asthma, it was not so evident what part the mucous membrane took in producing it, and whether the deeper organs of respiration did not exert an equal influence. Dr. Fraenkel proposed to determine the point by plugging the posterior and anterior nares. In this case, only the anterior nares could be plugged, as the patient lived at a distance. With this precaution, on dispensing the Dover's powders, he remained unaffected; but, in rubbing up ipecacuanha powder, the asthma came on, though without sneezing, and in a very mild form. Had the asthma been in any way due to the irritation of the deeper respiratory passages, it would have been worse when the anterior nares were plugged, because, in normal respiration, a part of the powder would be retained in the nose. That the attacks occurred, though mildly, when the ipecacuanha was powdered, can be explained on the supposition that the particles of ipecacuanha, when breathed in, were driven during expiration though the posterior nares on the nasal mucous membrane.

23. *Roth on Epistaxis Endangering Life.* — Dr. Theodore Roth recommends (*Memorabil.*, Heft 5, 1881) in cases of excessive and prolonged epistaxis, acetate of lead mixed with opium, which he gives every two hours in the form of a powder; subacetate of lead, 12 centigrammes (1.55 grains); pure opium, 1 centigramme. The author states, that one of his patients took in three days 3 grammes of acetate of lead and 40 centigrammes of opium, before obtaining complete relief from the epistaxis.

24. *Glasgow on an Operation for the Rectification of a Deflection of the Nasal Septum.*—The author (*Arch. of Laryng.*, Jan. 1, 1882) draws attention to an operation first proposed by Dr. Steele of St. Louis for the rectification of a deflected septum. It consists in making a stellated division through the mucous membrane and cartilage, which destroys in great measure the resiliency of the sternum. The divided septum is then pushed back to the natural line, and retained in position by plugs. The instrument necessary is a stout forceps, shod on one blade with knives set in a stellar form. The cutting blade is covered by a thin sliding shield, to protect the nostril from laceration during insertion. The plugs by which the straightened septum is supported should be sufficiently long to reach from the inferior meatus to the tip of the nose. An important feature of the plug lies in the pointed shoulder, which is inserted in the sulcus at the tip of the nose.

25. *Lefferts on Cases of Rare Congenital Deformity of the Posterior Nares and Throat.*—Dr. Lefferts discovered, during the rhinoscopic examination of a man, aged 25 (*Phil. Med. News*, Jan. 7, 1882), that the posterior edge of the septum, from its point of mergence into the parts making up the vault of the pharynx, to a point half way in its course from the floor of the nares, was divided vertically into two distinct halves, enclosing between them a space

large enough to contain, perhaps, the end of a lead-pencil. This space was more or less triangular in shape, its base lying above, and was lined apparently with normal mucous membrane. Its depth was not ascertained, but an anterior examination of the nasal passages disclosed nothing abnormal as to the configuration of the septum. There was no history of injury to the nose or to the skull. No symptoms were referable to the condition, and its presence was of course unknown to the patient. In a second case, a girl, aged 19, two symmetrical ovoid perforations, of the size of a small pea, were present; one on each side of, and just above, the point where the anterior pillar of the fauces loses itself in the broad expanse of the soft palate. Their edges were swollen and rounded, and free from all cicatricial tissue. The condition was evidently congenital. The patient never had an ulcerated sore throat, and remembered that the openings had always existed. They gave rise to no inconvenience, and demanded no surgical interference.

26. *Brandus on Complete Occlusion of the Left Side of the Nose.*—This case is reported in the *New York Med. Record*, Nov. 12, 1881. The patient, a young girl, complained of obstruction in the right nostril. After having removed several polypi, Dr. Brandus found a layer of bone situated one inch and three-quarters above the nostril, which obstructed all the orifice. It was perforated with the galvano-cautery, and nasal respiration re-established.

27. *Little on Hypertrophy of the Right Side of the Nose.* — Dr. Little showed, at the New York Surgical Society (*New York Med. Record*, Nov. 26, 1881), a woman, aged 25, who, for five or six years, had noticed that the right side of the nose was larger than the left. From that time it gradually increased in size, and the last year had made rapid progress. There was no pain. To the touch it felt like a nævus.

28. *Seiler on the Effect of the Nasal Cavity upon the Voice and Articulate Speech.*—After describing the process of vocalisation in general, Dr. Seiler (*Arch. of Laryng.*, vol. iii, No. 1) considers the results which are produced upon articulate speech by an alteration of the parts concerned in articulation. When paralysis or perforation of the soft palate exists, speech will have a nasal sound, caused by too strong a resonance in the nasal cavity; for the air, set in vibration by the vocal cords, enters it directly, and probably produces a stationary wave, which, as a self-sounding body, interferes with the resonance of the oral cavity, and, in a measure, destroys the character of the vowels. There is, moreover, not sufficient air passing through the mouth, since most of it escapes through the nose, to produce the consonants with sufficient loudness and distinctness. For this reason, articulate speech becomes almost impossible in cases of fissure of the hard palate. On the other hand, if stenosis of the posterior opening of the nasal cavity exist, very little alteration in the speech is noticed, except in the pronunciation of *m* and *n*. If there be stenosis of the anterior nares, the effect is entirely different. The vibrations of the air within the cavity cannot come out; and, although they are carried through the bones of the skull to the ear of the speaker with great force, the sound reaches the listener without being qualified and intensified by nasal resonance. As in posterior stenosis, *m* and *n* are changed in pronunciation into *b* and *d*.

W. J. Walsham.

OPHTHALMOLOGY.

RECENT PAPERS.

1. Abadie. — Plastic Operations on the Eyelids. (*L'Union Méd.*)

2. Schmidt-Rimpler.—The Specific Reaction of the Optic Nerve to Mechanical Irritation. (*Centralbl. für die Med. Wiss.*, Jan. 1882.)

3. Schön.—The Venous Pulse of the Retina. (*Klin. Monats. für Augenheilk.*, Sept. 1881.)

4. Michel.—The Condition of the Eye in Disturbance of the Carotid System. (*Klin. Monats. für Augenheilk*, Oct. 1881.)

5. Kipp.—Eye-Affections from Malarial Poisoning. (*Trans. of Med. Soc. of New Jersey.*)

6. Dufour.—Transplantation of Conjunctival Mucous Membrane. (*Revue Méd. de la Suisse Romande.*)

7. Baudry.—Emphysema of the Eyelids. (*Revue de Thérap.*, No. 1, 1882.)

8. Rheindorf.—Laceration of the Vitreous Body in Extraction of Cataract.

9. Testut.—The Mode of Cicatrisation of the Tendon after the Operation for Strabismus. (*Rec. d'Ophthal.*)

10. Carreras-Arago.—The Action of Homatropine (*El Siglo Medico*, Jan. 22, 1882.)

11. Daguenet.—Traumatic Retinitis. (*Recueil d'Ophthalmol.*, Dec. 1881.)

12. Galezowski.—Traumatic Cataract. (*Ibid.*, Dec. 1881.)

13. Galezowski.—Persistence of the Hyaloid Vessels. (*Ibid.*, March 1882.)

1. *Abadie on Plastic Operations on the Eyelids.* —In an important note on two cases of ectropion, treated by direct transplantation (*L'Union Méd.*), Dr. Abadie begins by drawing attention to the older methods for reparation of ectropion, namely, those where a flap is taken from the vicinity and those from a more distant region. Although the surgical object of protection was oftimes attained in these cases, the results were frequently indifferent. In the former instance, either a shapeless lump arose at the pedicular attachment of the flap, or a new cicatrix with its concomitant contractions originated; or, again, the operation was unsuitable from too large an area being occupied by cicatricial tissue. The second, or Indian method, that of taking skin from the arm, is condemned on account of difficulty of execution and of fatigue to the patient. While, in the older method, the flap remained connected by a pedicle with the part from which it was taken, more recent surgery has dispensed with this attachment, and now transplants the flap directly. Although this is known as Wolfe's method, Lefort was the first to transplant large flaps directly, and to point out that it is indispensable to get rid of the cellular tissue and of its fat. This transplantation of large flaps of skin, Dr. Abadie conceives to be superior to epidermic grafts or to dermic transplantation *en mosaique;* for, though the latter may produce less retractile cicatrices, they are incompetent to fill up a loss of substance. In Dr. Abadie's first case of ectropion, a large flap of skin was taken directly from the posterior surface of the forearm. There was only partial success, for, though the ectropion was diminished, about a third of the flap sloughed. Rapid cooling at the time of operation the surgeon conceived to be the cause of mortification, and, in the succeeding case, measures were adopted to prevent its recurrence. Here the lashes touched the brow, the inflamed conjunctival mucous membrane bled at the merest touch, and an eye-protector had

to be worn continually. As all the neighbouring tissue was cicatricial, a flap of skin, deprived of fat and of connective tissue, and measuring six centimètres by four centimètres, was taken from the arm. It happened to fit exactly, and was kept in position by six fine silk sutures. During the operation, the flap was kept warm by a sponge steeped in a saturated solution of boracic acid at a temperature of 118 deg. Fahr. A thin bandage was then applied, and the temperature maintained by a bladder filled with hot water (118 deg. to 122 deg. Fahr.), renewed every half hour. At the end of forty-eight hours there was no change, and the hot applications were renewed less frequently. The sutures were removed on the fourth day. About the sixth day, the superficial epidermic layer began to separate. However, with the exception of some slight ulceration of the cicatricial tissue adjoining the lower margin of the flap, all went well; and, at the end of three months, the ectropion was quite cured, although the graft had diminished to 3½ centimètres by 1 centimètre. M. Abadie mentions Mayer's case, operated on in March 1881. Here the flap was triangular, measuring 5 centimètres at the base and 6 centimètres from base to apex. Although no special precautions are reported to have been taken against the chilling of the flap, the operation was perfectly successful. M. Abadie is of opinion, however, that, in all cases where transplantation of an extensive flap is required, measures should be taken to prevent loss of heat.

2. *Schmidt-Rimpler on the Specific Reaction of the Optic Nerve to Mechanical Irritation.*—The author (*Centralbl. für die Med. Wiss.*, Jan. 1882) begins by narrating the case of a very intelligent patient, the stump of whose optic nerve was irritated immediately after extirpation of the globe. On being asked if there were any sensation of light, he promptly answered in the negative. The vision of this eye had been tested immediately before the operation by finger-counting at a distance of four feet. Microscopical examination of the optic nerve showed moderate increase of cells and nuclei of the connective tissue, but there was no atrophy. From Professor Rothmund of Munich, Dr. Schmidt-Rimpler received corroborating testimony, accompanied by strictures on the imperfect observations of the older surgeons. But Schmidt-Rimpler is of opinion that the flashes of light might have been caused by the operative methods then in vogue, and the retina irritated by undue traction on the optic nerve at the moment of section. But though section of the optic nerve may not produce sensation of light, it does not follow that a specific reaction may not respond to mechanical irritation; for example, in the case of a lad suffering from pain and sympathetic amblyopia in the left eye after enucleation of the right ball two years previously, there was acute pain on touching the stump with a probe; but there was no sensation of light. The neurosis ceased on removal of the stump. Schmidt-Rimpler then made experiments on six patients of intelligence, from whom the globe had been removed only a short time before. A pear-shaped electrode was pushed about the vicinity of the stump of the optic nerve. Of the six persons, examined in a perfectly darkened room, two perceived flashes of light when pressure was made on a place corresponding to the position of the optic nerve. Pressure on other parts produced no result. One of these patients remarked the similarity of this sensation of light with that produced by electricity. These experiments are held to be conclusive of the specific reaction of the optic nerve to mechanical irritation. The other four patients, in whom pressure did not produce any sensation of light, perceived it on the application of the electric current. One electrode being placed in the orbital cavity, the other on the neck, four to eight Bunsen's elements sufficed to call forth indubitable sensations of light. Failure of pressure to produce any effect on the four cases is assigned to partial atrophy or great retraction of the optic nerve.

3. *Schön on the Venous Pulse of the Retina.*—In the case narrated (*Klin. Monats. für Augenheilk.*, Sept. 1881), the heart pulsated 16 to 23 times a minute. Over the left side was audible a systolic murmur, with its maximum intensity in the second intercostal space. The radial pulse was not small. In both eyes a moderate physiological cup existed On either side the venous pulsation was evident, but was more marked in the veins of the left eye. The course of the pulsation was as follows. A moment after the radial pulse, a sudden dilatation of the veins occurred. The maximum of dilatation was succeeded by a gradual subsidence, and a stationary period, lasting two seconds, ensued, and during this a stream of blood flowed equably through the vessels. Between this stage and the next pulsation, there was neither emptying of the veins nor any sudden pallor, indicative of a respiratory complication. The occurrence was most characteristic in the veins which took a downward course. There was no visible pulsation in the arteries. The author lays down the propositions: that the venous pulse is a phenomenon of obstruction; that the outflow of the ordinary quantity of venous blood is prevented by compression of the veins; that the artery, thickened by the pulse-wave, effects this compression; and that the place where this occurs must be the optic nerve-tract, as far as the lamina cribrosa. With regard to the last proposition, much reliance is placed on the large amount of connective tissue surrounding the central vessels of the optic nerve, the author presuming that this would aid the compression and so increase the amount of pulsation.

4. *Michel on the Condition of the Eye in Disturbance of the Carotid System.*—This communication (*Klin. Monats. für Augenheilk.*, Oct. 1881) is introduced by observations from the author's own experiments. Compression of the carotid artery was found to produce temporary pallor of the papilla, slight arterial injection, followed by venous stasis and absence of the venous pulse. Ligature of the carotid has similar effects, but the anæmia is more enduring: the intra-ocular pressure is diminished, while the pressure in the carotid of the opposite side is increased. The effect of disturbances of the carotid system on the nutrition of the eyeball is illustrated by two cases. Ophthalmoscopic examination of an extremely anæmic girl, suffering from double amblyopia, the field of vision being unaffected, revealed extreme arterial anæmia, large and injected veins, and œdema of the retina. Further examination made manifest aneurysmal dilatation of both carotids. The second case was that of a man aged 49, affected with rapidly occurring diminution of sight. The right field of vision was normal, and ophthalmoscopic examination revealed arterial and venous anæmia of the retina, which was soon followed by venous hyperæmia. Hypertrophy of the right ventricle and thrombosis of the right carotid artery were diagnosed. In a few days, total pulselessness ensued, and to this was added clouding of the papilla and of the retina. This condition was terminated

by atrophy of the disc. The diagnosis was afterwards confirmed, and no embolus could be detected. Chronic disease of this artery is followed by nutritive alterations of definite parts of the eye, and sixty-two observations serve to bring into connection the origin of cataract and atheromatous changes in the carotid walls, viz.: 1. twenty-four cases of unilateral cataract, with unilateral affection of the carotid (or developed unilaterally in a significantly preponderating manner); 2. twenty-one cases of double cataract, with advanced atheroma of one carotid, affected earlier or more diseased than that of the opposite side; 3. nine cases of double cataract, developed bilaterally, and accompanied by advanced atheroma of both carotids; 4. eight cases of cataract associated simultaneously with atheroma of the carotid and enlargement of the thyroid body. Hence senile cataract may be regarded as a consequence of the atheromatous changes in the carotid walls; and hence, also, if cataract be hereditary, it is only so indirectly, and that by transmission of this vascular disease.

5. *Kipp on Eye-Affections from Malarial Poisoning.*—Dr. Kipp (*Trans. of the Med. Soc. of New Jersey*) divides his subject into the maladies which may affect the eye during the paroxysm and those which are consecutive to it. After the admission of no personal knowledge of the former group, reference is made to the symptoms, which are mainly hyperæmia of the conjunctiva, lacrymation, photophobia, blepharospasm, irritation of the iris, iritis, and temporary amaurosis. Usually no marked changes were observed with the ophthalmoscope, but in a few cases œdema of the papilla and hyperæmia of the retina were detected. Of the second class of cases, which are of a much less ephemeral nature, the most frequent lesion is a superficial ulcer of the cornea, usually of one eye only, always accompanied by severe pain in and around the eye, by photophobia, and lacrymation. The first stage of the ulcerative process is an opaque linear swelling, with some injection of the adjacent cornea; the central portion sloughs off; and, though in favourable cases the ulcer spreads no further, yet a progressive destruction of the superficial corneal layers may follow. In either case, the reparative process is extremely slow. Other affections of the eye, which have been noticed to occur in connection with malarial fevers, are diseases of the uveal tract, hæmorrhage into the vitreous body, retinal hæmorrhage, optic neuritis, partial or total loss of vision of one or both eyes, without visible changes in the ocular structures, and, therefore, presumably dependent on disturbances in the nervous centres. The author had read a paper on malarial keratitis before the American Ophthalmological Society in 1880, and in his present article quotes O. Becker to the effect that, though this disease was described by the older writers, it is totally ignored in modern literature. This is certainly not the fact, as can be found on reference to the writings of Macnamara and others; and it is a disease quite well known to the surgeons of India. R. G. Hebb, M.D.

6. *Dufour on Transplantation of Conjunctival Mucous Membrane.*—In the *Revue Méd. de la Suisse Romande*, M. Marc Dufour reports some cases in which he had transplanted conjunctiva of a rabbit to the human eye. In two cases, the operation was undertaken on account of symblepharon. The adhesions were dissected up, and to the denuded surface some conjunctiva of the rabbit was applied, and fixed in place by means of sutures. In the first case, that of an old woman, the operation failed because the graft died. In the case of a child aged 11 years, the operation was a complete success, the graft living. In the case of a man, from whose lid M. Dufour removed an epithelioma, a graft was taken from the buccal mucous membrane of the patient. The operation in this case, too, was a complete success. The author advises to wait a short time after the incision is made, before the graft is applied, also that care should be taken in the application of the sutures to prevent the edges of the transplanted piece from rolling under; and, finally, that the freshened surface and the graft should be washed in a solution of salicylic acid.

7. *Baudry on Emphysema of the Eyelids.*—Dr. Baudry of Lille, analysing in the *Gaz. des Hôp.* a case of emphysema of the eyelids and of the orbit, follows up his article with reflections intended to clear up this somewhat obscure question, and ends with the following conclusions. The appellation of spontaneous emphysema of the eyelids and orbit should be reserved for extremely rare cases, like those of MM. Jarjavay and Gosselin, in which, after attempting to blow the nose, the air passes spontaneously from the nasal fossæ to the cellular tissue of the orbits and eyelids. Emphysema of the eyelids and of the orbit, consecutive on the action of blowing the nose or of sneezing, is the result, in the majority of cases, of a fracture of one of the bones of the inner wall of the orbit, allowing the direct passage of the air from the nasal fossæ into the areolar tissue of the eyelids or of the orbit. The emphysema will be limited to the eyelids or to the orbit, or may occupy both regions, according to the situation, the extent of the fracture, and the greater or less pressure of the expired air. In rare cases, the so-called spontaneous emphysema follows complete rupture of one of the walls of the lacrymal duct, consequent on catheterism or other surgical operation, whether the rupture be accompanied or not by bony lesions.

8. *Rheindorf on Laceration of the Vitreous Body in Extraction of Cataract.*—In order to prevent the formation of secondary cataract, after extraction of the lens, the author tears the hyaloid membrane with a cystotome immediately after the removal of the lens, and allows the vitreous humour to come forward into the anterior chamber. In this way, the capsule and any remains of lens-matter are pushed out of the pupillary space, and so no secondary cataract can be formed. Any slight loss of vitreous humour accompanying this procedure is of no moment. Besides the avoidance of secondary cataract, further advantages are claimed for this method of extraction. Pulling of the capsule and suspensory ligament on the ciliary processes, and consequent irritation, are avoided; and the circulation in the uveal tract is improved. The author has found, after the experience of a large number of cases, that by this method he gets better vision and quicker healing.

9. *Testut on the Mode of Cicatrisation of the Tendon after the Operation for Strabismus.*—Dr. Maurice Testut (*Rec. d'Ophth.*) made investigations on dogs (terriers). Either the rectus internus or the rectus externus was divided, the animal kept alive about a month, then killed, and the eye carefully examined, with the following results. 1. The rectus internus is inserted into the sclerotic 4½ millimètres from the edge of the cornea, and after strabotomy retracts 6 or 7 millimètres. 2. The rectus externus is inserted into the sclerotic 5 millimètres from the edge of the cornea, and after strabotomy retracts 5 or 6 millimètres. 3. The cut tendon is inserted

principally into the sclerotic, and secondarily into the overlying conjunctiva; the insertion is by means of fibrous prolongations. The author recommends in division of the internal rectus sparing separation of the connections of the sheath of the muscle with the conjunctiva and sclerotic.

W. CHARNLEY, M.D.

10. *Carreras-Arago on the Action of Homatropine.*—Dr. Carreras-Arago (*El Siglo Med.*, Jan. 22, 1882), from his experiments with homatropine, has deduced that, when used in individuals under 35 years of age, it produces only paresis of the ciliary muscle; and that this action, though similar, is milder and more transient than in the case of atropine. In individuals over 35 years, whose accommodation has fallen to five or six dioptrics, a true paralysis is produced.

11. *Daguenet on Traumatic Retinitis.*—Dr. Daguenet records an interesting case (*Recueil d'Ophthal.*, Dec. 1881) of that very rare affection, traumatic retinitis. The patient was a soldier, who struck his eye against a tent-pole. Shortly after the accident, the condition of the organ was as follows: considerable conjunctival injection, dilated pupil, tremulous iris, complete loss of sight, hæmorrhage into the vitreous body, sufficient to prevent an ophthalmoscopic examination. Twenty days later, the condition was changed as follows. The pupil was dilated, the iris tremulous, the lens transparent, the vitreous humour full of floating bodies; the fundus could now be seen, and showed the existence of remarkable changes. The papilla could only be recognised by its rounded form, and by the presence of a large retinal vein. It was completely covered and masked by a white exudation, which extended round it for about the distance of two diameters. The retinal vessels could not be traced into this mass. Two large ecchymoses were situated on the retina, on the upper border of the patch of exudation. Sight was reduced to qualitative perception of light. A fortnight later, distinct signs of approaching pigmentation, round the edges of the exudation, could be perceived.

12. *Galezowski on Traumatic Cataract.*—Dr. Galezowski, in a recent paper (*Recueil d'Ophthal.*, Dec. 1881), groups all traumatic cataracts in three main divisions, viz.: 1. Simple, that is, without the presence of foreign bodies; 2. Where foreign bodies are present in the lens; 3. Where other parts of the eye have been wounded as well as the lens. He remarks that the first variety is frequently found in children, and this he attributes to the use of steel pens in schools, and to the great number of mechanical toys which are now in fashion. He also mentions, as belonging to this form, an interesting case of traumatic cataract produced by lightning. The patient was a soldier, who, being on duty on the night of April 22, found himself, for an instant, the centre of an electric discharge. He was, he stated, surrounded by flame, received a violent shock, and became giddy. He at once noticed that his eye-sight was impaired slightly. In August following, a semi-opaque cataract was detected in the right eye; retinal sensibility not having been affected. Dr. Galezowski gives further instances of these simple traumatic cataracts having been caused by blows or falls on the head. In children, such cataracts are singularly free from danger. They became absorbed of themselves, and rarely require surgical interference. In considering the second variety of traumatic cataracts, that is, those in which foreign bodies are present, Dr. Galezowski lays down the doctrine that such bodies cause, as a rule, no disturbance, and may be tolerated in the eye for an indefinite period. The only exception he would make is, when the foreign body is situated close to the surface of the lens, or is in contact with the posterior surface of the iris. When such is the case, iritis or choroiditis may be looked for; and, therefore, in such cases, surgical intervention is necessary. The extraction of the lens should only be undertaken when the foreign body is plainly visible, so that it may be removed as the first stage of the operation. If left behind after the capsule has been opened, parophthalmitis may supervene. He believes that the presence of a foreign body in the lens may always be recognised by the following signs. 1. The opacity of the lens is always capsulo-lenticular. 2. There is on the cornea a small wound or scar, denoting the point of penetration of the foreign body. 3. The actual situation of the foreign body is shown by a black or brownish discolouration in the centre of the white lenticular opacity. As regards the third division, or that of 'compound traumatic cataracts', Dr. Galezowski, in this paper, speaks only in general terms, reserving the bulk of his observations for a future occasion.

13. *Galezowski on the Persistence of the Hyaloid Vessels.*—Dr. Galezowski (*Rec. d'Ophth.*, March 1882) records three cases of the persistence of the hyaloid vessels which have lately come under his notice. The first presented itself in a patient aged 74, who suffered likewise from congenital amblyopia. The remains of the vessel were adherent to the posterior surface of the lens, a diagnostic point to which Dr. Galezowski attaches considerable importance in doubtful cases. In the second case, the presence of the hyaloid vessels was associated with posterior polar cataract. In the third, the canal of Cloquet remained patent, this anomaly being further associated with congenital amblyopia. In young children from 1 to 2 years of age, anomalies similar to the above may be found occasionally in the neighbourhood of the disc, and are due to the persistence of the canal of Cloquet. But with the growth of the globe the canal and vessels become so reduced that, even with a strong lens, their presence is difficult to make out.

LITTON FORBES.

REVIEWS.

Materia Medica and Therapeutics. Inorganic Substances. By CHARLES D. F. PHILLIPS, M.D., Member of the Royal College of Physicians, late Lecturer on Materia Medica and Therapeutics at the Westminster Hospital. London: J. and A. Churchill. 1882.

THE first volume of this work, the 'Vegetable Kingdom', was published in 1874, and soon obtained a high and richly deserved reputation as an authority on the subject of which it treats. In explanation of the delay in the appearance of this, the second volume, it may be stated that in 1877 Dr. Phillips met with a severe railway accident, which for a long time incapacitated him from work of any kind. In fact, the present volume comes to us from a bed of pain and sickness; and this fact is urged in mitigation of any shortcomings which it may present. But, in truth, no apology is needed, for the subject has been carefully handled, and the 'Inorganic Kingdom' is a worthy companion of its distinguished predecessor.

Most teachers of materia medica think that it would be better to completely separate pharmacology from therapeutics; but Dr. Phillips is not of this opinion, and considers that they may be conveniently discussed side by side in one work, and that their study should be carried on simultaneously. In the present volume, more space is devoted to pharmaceutical chemistry than is now usual in works on materia medica; and this the author thinks to be a distinct advantage both to students and to practitioners. How far he is right in his estimation of the requirements of medical men remains to be seen; but we must confess that, in our experience, very few in active practice find much time to devote to chemistry.

A great feature in the present work is the systematic manner in which the author deals with each drug. First, an account is given of its mode of preparation, followed by its characters and tests, and the mode of absorption and elimination. The physiological action is then discussed, usually very fully, and an account is given of its toxic properties and of the *post mortem* appearances it produces. The theory of its action is considered, and its synergists and antagonists receive adequate attention; the last subject including a description of the antidotes to be administered in cases of poisoning. Under the head of therapeutics, a separate paragraph is devoted to each disease. This arrangement is excellent, and greatly increases the value of the work as a book of reference. Most of the chapters have been carefully written, and many of them are excellent and contain much original work, the result of many years' practical experience.

The chapter on Phosphorus is one of the best in the book, and should be read by every one who is not thoroughly and practically acquainted with the almost unlimited resources of this powerful remedial agent. The author rarely gives it in the large doses recommended by recent writers, but finds that its full therapeutic effect may be obtained from, at the most, 1-50th of a grain three times a day. Speaking of intercostal neuralgia, he says: 'For upwards of twenty years I have been accustomed to use phosphorus in this affection, and can speak favourably of its power. I have notes of fifty-six cases, wherein the pain quickly subsided under this treatment, and did not, so far as I know, subsequently return. In some instances, phosphorus succeeded where arsenic had quite failed. The dose was 1-100th to 1-50th part of a grain three times a day.' He adds: 'With regard to the dose of phosphorus in neuralgia and nerve-disorders generally, I may say that, in my experience, the comparatively large doses recommended by Dr. A. T. Thompson cannot be tolerated for any length of time by the system. They may seem at first to stimulate, or rather *over*-stimulate, the nerve-centres, but after a short time they depress in a disastrous manner; whilst the small doses of 1-200th to 1-50th part of a grain, continued for due time, nourish and strengthen nerve-tissue without any evidence of undue excitement. A therapeutical, and not a physiological, action is to be always desired.' The author speaks highly of the action of phosphorus in phthisis, having employed it, with marked success, in over eight hundred cases. He finds that, although it will not cure advanced phthisis, it will in many cases arrest its progress, at all events, for a time. It improves the condition of the throat and voice, relieves the dry harassing cough, and arrests the colliquative diarrhœa and night-sweating. Its use is not altogether free from danger, for, when there is a tendency to hæmorrhage, it may induce hæmoptysis. With regard to the treatment of poisoning by phosphorus, the author points out that sulphate of copper and oil of turpentine are the best antidotes. With any soluble salt of copper, phosphorus forms a black phosphide, which is not poisonous; and, as cupric sulphate is a powerful emetic, it is specially indicated when the poison has been taken by the stomach and the remedy can be at once applied. Five grains should be given every two or three hours until free vomiting is induced, and should then either be continued in smaller doses with opium, or turpentine may be substituted. It is not, as the author very properly points out, every kind of oil of turpentine that is an antidote to phosphorus. The pure German and American turpentines are useless, and it is the crude acid French oil, or that which has become ozonised by long exposure, which gives reliable results. The explanation of this apparent anomaly is given in considerable detail.

Although the author constantly gives us the results of his own ripe experience, he is not unmindful of the claims of others; it fact, his work fairly bristles with quotations and references. In the section on the Physiological Action of Arsenic alone, there are over eighty references, including abstracts from the papers or writings of Guy, Hunt, Ludwig, Farquharson, Erasmus Wilson, Hirtz, Gubler, Roux, Astley Cooper, Graham, Morgagni, Agricola, Christison, Duchenne, Charcot, Ringer and Murrell, Claude Bernard, and other well known observers. In some instances, we are bound to say, the author has been too conscientious, certain chapters being overburdened with references and quotations. When a mode of treatment is generally adopted, it may be regarded as common property, and it is unnecessary to give credit to any particular individual.

Under the head of Iodine, an excellent account is given of the injection of Morton's solution in the treatment of spina bifida and chronic serous effusion in the knee-joint, special reference being made to the cases published by Mr. Gould and Mr. Macnamara respectively. Dr. Phillips himself appears to have had very considerable experience of the use of iodine injections, and his two cases of pericardial effusion treated by this method will be read with interest, and are deserving of attention. He also records in detail some very remarkable cases of abdominal and ovarian cysts treated by tapping and the free injection of iodine. In cases of meningitis, apparently tubercular, he has seen marked benefit from the free administration of the iodides, either alone or in combination.

Dr. Phillips gives an account of a few drugs, such, for example, as gold, barium, and cadmium, not often used in medicine; but, as a rule, he keeps to the beaten tract, and is content to tell us what is known about our old friends. Taking it on the whole, the book is admirably done, and cannot fail to become a speedy favourite with both students and practitioners. To the therapeutist, it is a mine of wealth.

Eczema and its Management. By L. Duncan Bulkley, M.D., etc. Pp. 344. London: Churchill. 1881.

This is a more detailed treatise than the well-known one of Dr. McCall Anderson on the same subject, and presents a good practical summary of modern views. Few will open it without finding some fresh suggestions and useful hints, though they may

notice, at the same time, a certain amount of verbiage and a good deal of repetition.

Statistics of 2,500 cases are given, with the conclusion that this malady forms nearly half of all cases of cutaneous disease, and 180 different names for its manifestations are enumerated! (p. 35). As to causation, malaria is said to be of little influence, asthma is found closely allied, also gout, but not rheumatism, renal, or lung disease. Under this last heading, bronchitis should have been excepted, for its intercurrence with general eczema is not infrequent, and is, in fact, alluded to elsewhere in the volume. Under *Diagnosis*, it is noticed 'the itching of scabies is much less than that of eczema; it is far more bearable'. That depends; it is not always so. Much attention is given to the question of local *v.* constitutional origin, and Dr. Bulkley, after ample observations of the Vienna teachings, still has little difficulty in recognising the latter—the constitutional origin—as the main fact, though he 'does not ignore the importance of local cell-action'. He has seen repeated instances where gout, eczema, and asthma alternated in various generations and branches of a family in such a manner as to lead to the conclusion that they were intimately connected. He might have added that this problem was well worked out by Anstie, who included neuralgia in the list.

Eczematous subjects are roughly classed as gouty, strumous, or neurotic, answering, in the main, to Erasmus Wilson's 'assimilative, nutritive, and nervous debility'; but the American writer's meaning is the clearer of the two.

With the observation that 'tobacco, if used at all in excess, has a most harmful effect in eczema', we have not before met. Tea is also blamed.

Under *Treatment*, the author recognises the disease as one always 'of lowered vitality', at the same time that he insists strongly and properly on the importance of 'unloading the liver', etc. He records a protest, however, against the now general use of mineral waters, and prefers blue pill and colocynth, or, for habitual constipation, aloes and iron sulphate; for children, calomel, with rhubarb and soda. As to internal remedies for itching, he discountenances sedatives, but has seen benefit from gelsemium. For general treatment, acetate of potash, with nux and quassia, divides the honours with the mixture of sulphates. Amongst practical points of external treatment, he objects to most of the advertised soaps, and notes that glycerine irritates some skins; also that vaseline and its congeners often fail as a basis, since, 'owing to their great fluidity at the temperature of the body, they do not hold the medicament in position and protect parts from the air sufficiently well'. He favours little washing, and, in general, soothing treatment. For chronic cases, any stimulant measures should be 'brisk and sharp', not continuously irritant. Favourite ointments with him are: Tannin (3j to 5j), and zinc oxide, 3ss—3j, with 3j—3iii of tar ointment in an ounce of cold cream.

The risks and the value of caustic potash are fairly pointed out with illustrations (1) of a severe erysipelas after one strong application; (2) of the cure of a bricklayer's chronic thickened hand by a twenty-grain solution. Eczema behind the ears, commonly obstinate, will often bear stimulation well, *e.g.*, by the compound tincture of green soap, which should be followed by diachylon ointment. Between the toes, where the malady is perhaps still more troublesome, the same ointment, or a tarry one, foot-baths containing tannin, and dusting with acetate of aluminium, are recommended. For eczema of the hands, rubber coverings are moderately praised; for eczematous and varicose ulcers of the legs, rubber bandages are spoken of much more highly than English experience would support. For eczema about the anus, brief bathing with very hot water, and subsequently tannin ointment, is a treatment that has answered well. For pruritus vulvæ, chloral with camphor is a good suggestion; the writer has found chloral alone very good. For 'eczema marginatum', or an allied rash in the axilla, sulphurous acid is ordered, but a lotion containing bismuth and perchloride of mercury, with spirit, well deserves mention. For general eczema of the trunk, after an alkaline bath, carbolised glycerine of starch is rubbed on; the application of tinctura ferri perchloridi does not seem to be known, but it well deserves trial in later scaly stages: Hebra's prolonged warm bath should also be remembered.

The formulary at the end is comparatively simple, probably in accord with the teaching that it is better to know how to use a few remedies well, than many slightly. Stillingia is the only unfamiliar drug, and that seems ordered as a diuretic. Bartholow speaks of it as antiscrofulous and antisyphilitic. Iodoform deserves a place.

The book is well printed and easily read. A few peculiarities reveal its nationality. 'Skeptical' and 'fullness' look curious; 'will' is often put for 'shall', and we notice, *en passant*, 'illy defined', 'gotten ready', 'in this location', 'in its incipiency', 'I had him employ'. Still, these points are secondary, and the brief excerpts above given indicate a copious store of practical information. Dr. Bulkley's name would indeed be a guarantee as to this.

E. Mackey, M.D.

Lectures on the Pathology and Treatment of Lateral and other forms of Curvature of the Spine. By William Adams, F.R.C.S., Surgeon to the Great Northern Hospital, etc. 2nd edition. London: Churchill. 1882.

In the introductory lecture, the author refers to the 'absence of any facilities in the hospitals of this metropolis for the clinical study of cases of spinal deformity; the result being that very little advance has been made in our knowledge of the causes, mode of production, and pathological changes in some cases of deformity of the spine'; that, with regard to lateral curvature, there is 'no fixed pathology', and, therefore, the principles of treatment are undetermined. The work before us, however, shows that, if nothing has been done in the general hospitals to elucidate the pathology of lateral curvatures, yet its author has not failed to make excellent use of many opportunities to inquire into and record the pathological conditions which are associated with the origin and progress of this deformity.

In discussing the mechanism of motion in the spinal column, and the essential difference between its flexibility and the free motion allowed in the movable articulations of the extremities, the author remarks upon the absence of 'surface-play' between the bodies of the vertebræ, and the mechanical arrangement of the oblique articulating processes. By this peculiarity of construction, the spine is maintained in an erect position by the smallest possible expenditure of muscular force; and the position of the spine, when the individual stands erect, is due to mechanical construction, and not to active tension of the muscles; in fact, the muscles are in a state simply of 'vigilant repose,

ready on the instant to check and limit the flexion of the spine when its balance is disturbed'. Mr. Adams states that the flexibility of the bodies of some gymnasts depends more upon movement in the ball-and-socket articulations of the hips and head than upon movement between the vertebræ. The theory, that the dorsal muscles take so small a part in the maintenance of the spinal column in an erect position, accords with the experience of the author concerning the origin of lateral curvature. He finds that, in about half the number of cases which come before him, the dorsal muscles are not apparently weak.

Curvature depends greatly upon the constitutional conditions, such as hereditary tendency, 'which may be traced, probably, in half the cases which come under our notice'; also, 'a strumous diathesis, associated with which the worst forms of curvature, often erroneously classed as cases of rickets, are frequently seen; and constitutional debility, either existing from infancy or induced by febrile affections, etc.' Cases occurring before twelve years of age are chiefly due to hereditary tendency. In those occurring after that age, 'local causes, acting mechanically so as to disturb the equilibrium of the spinal column, are usually, if not always, the direct cause of the deformity'.

These local causes consist in bad habits of position, or in positions peculiar to various occupations, or in obliquity of the pelvis. Such local causes do not act by unequal muscular action, but by producing unequal pressure upon the two lateral halves of the spinal column. The spine being bent to one side, pressure is brought to bear chiefly upon the articulating processes of that side. At the age of puberty, these processes are not thoroughly ossified, and, therefore, they are soon influenced by undue pressure. 'The joints of the articulating processes being situated posteriorly as well as laterally, the spinal column cannot yield in their direction without wheeling partially round; and it is owing to this rotation that the transverse processes, and the ribs, are directed obliquely backwards upon the convex side of the curvature.'

A great many other interesting points connected with the pathology and symptomatology of the affection are ably and fully discussed, and a short chapter is devoted to anterior and posterior curvature of the spine.

The treatment is to vary in accordance with the condition of the patient and with the cause. Partial recumbency, gymnastic exercises, constitutional treatment, and mechanical support and pressure, are one or other, or all, to be used. Referring to some other plans of treatment, the author entirely disapproves of Dr. Sayre's mode of treatment, and he observes that, at the time of application of the jacket during suspension, 'some improvement is effected, and the patient commonly gains from half an inch to one inch in height from the straightening of the spinal curvature; but', he writes, 'I have always observed that the gain is quickly lost, so that the jacket fails "as a curative agent".'

The impossibility of fixing the spine by a plaster-of-Paris jacket, will probably before long be recognised by all practical surgeons; and we shall not be surprised to find in the next edition of this work that the author's recognition of the fact that the spine is not retained in one position by the jacket, will have led him to doubt its usefulness in the treatment of caries of the spine. At present, p. 272, however, he is still an advocate of Dr. Sayer's plan of treatment of Pott's disease.

The careful and systematic style in which this author usually writes is maintained in the volume of which we have now given but a scanty review.

E. Noble Smith.

Opium-Smoking in America and China. A Study of its Prevalence and Effects, immediate and remote, on the Individual and the Nation. By H. H. Kane, M.D. New York: G. P. Putnam's Sons. 1882.

We are inundated with works on opium-eating and opium-smoking. It would almost seem as if every one who had ever seen an opium-pipe or heard of opium-smoking had an irresistible desire to record his opinion on the subject. However, we must not grumble at Dr. Kane's book, for he is the author of a popular work called *Drugs that Enslave*, and is, if we mistake not, the medical superintendent of the De Quincy Home at New York City. He gives us, to begin with, an excellent bibliography of the subject, and for this we cannot be too grateful. He tells us in his preface that the first white man who smoked opium in America was a sporting character named Clendenyn. This was in California in 1868. The second, induced to try it by the first, smoked in 1871. The custom gradually spread, and is said now to be extremely prevalent in America. Those who know most about the matter 'are those theatrical people and travelling salesmen, who having become slaves to the habit, make it their business to find out at every city or town at which they stop whether there are smoking houses there, so that they may enjoy the companionship of others in their vice'. These people say, according to Dr. Kane, that there is hardly a town of any size in the East, and none in the West, where there is not a place to smoke and Americans smoking. It is true that in many towns there is no regularly established opium-house, but there is always a Chinese laundry, the back room of which serves the purpose. Many habitual smokers, when starting on a tour of acting, gambling, or selling goods, feel so certain that the implements and drug can be obtained at every place at which they stop, that they take neither pipe nor opium with them.

The question will naturally be asked of what class are those who smoke opium; the answer is, representatives of all classes; merchants, actors, men of leisure, sporting men, telegraph operators, mechanics, ladies of family, actresses, married women, and young girls. Those who have the most leisure, those on whose hands time hangs heavily, are the most prone to drift into the habit, and be carried away by it.

Perhaps the most interesting part of Dr. Kane's book is the chapter devoted to the treatment of the opium-habit. The drugs on which he places the greatest reliance are capsicum, digitalis, and cannabis Indica, in large and frequently repeated doses. He gives bromide of potassium and bromide of sodium when there is much reflex nervous trouble. The bromides should be given freely diluted with water, and in doses of not less than a hundred grains twice a day for a few days. Bismuth and catechu in large doses are given for the diarrhœa; chloride of gold and sodium, half a grain every two hours, or gelseminum, for the pains in the limbs; massage and electro-massage, hot baths, and cold spray for the same purpose; oxide of zinc and atropia for the

profuse perspirations, and hyoscyamia and chloral to produce sleep. Stimulants, of which iced champagne is the best, should be freely used for twenty-four hours only. Later, to relieve dryness of the throat, jaborandi is used; and for bronchitis, chloride of ammonium and benzoic acid. Tonics, short warm baths, with cold douche or spray, phosphorus and cod-liver oil, and out-door exercise, are all useful at times. The treatment can be satisfactorily carried out only in an establishment where the patient can be watched day and night for at least a fortnight.

Dr. Kane's work is full of interesting and amusing anecdotes, and is well worth reading. There are a few illustrations; one of the most striking being of a private smoking-room in China, showing the style of bunk, and representing a wealthy young man 'commencing his downward career'.

WILLIAM MURRELL, M.D.

Studien über Künstliche Glieder. By Dr. O. KARPINSKI, Oberstabs und Regiments-arzt. Berlin: E. S. Mittler und Sohn. 1881.

Studies on Artificial Limbs. By Dr. O. Karpinski. 1881.

THIS work is entirely devoted to the consideration of artificial limbs intended to take the place of limbs removed by amputation. The sparseness of literature on the subject makes a treatise of this nature written by a surgeon of special experience particularly valuable; and it will no doubt be welcomed by many members of the profession who have hitherto, from want of experience in this matter, been constrained to place themselves and their patients entirely in the hands of the instrument-maker.

In the introduction, an appeal is made to surgeons to persevere in attempts to improve existing prothetic apparatus, and the slow progress in this direction is referred by the author to the deficient interest taken in the matter by surgeons in general. The improvement in the construction of artificial limbs, which has of late taken place in America, is in part ascribed to the greater practical interest in the subject taken by American surgeons; although there, as in Germany, it must not be forgotten that the recent great wars, by inundating the country with maimed persons, especially of the middle classes, no doubt led to increase of competition amongst surgical mechanicians, and consequent improvement in their productions.

The introduction is followed by a critical history of prothetic apparatus carried back to the mention, by Pliny, of an artificial hand made for a soldier maimed in the second Punic war. In this section, all the artificial limbs which have specially marked steps in the progress of the art are minutely described and commented upon, and thus a very complete description is furnished of mechanical substitutes for deficiencies of the upper and lower extremities in each and every degree; the only exception, apparently, being that of apparatus designed to remedy defects caused by partial amputations of the hand. This sketch illustrates particularly well the rapid progress of the older workers to complicated mechanism designed to carry out the normal functions of the lost member; and, further, the necessary inconvenience and weight of such apparatus, which led first to its unpopularity, and, later, to a gradual return to simplicity of construction, combined with lightness, sufficient strength, and durability.

The third chapter is devoted to a critical consideration of the various materials of which the component parts of an artificial limb should be made, and as to how far efforts to imitate the movements of nature should be carried. Many useful practical details are given regarding methods of fixation, points of bearing, clothing of the stump, the preservation of the apparatus in good working order, and the need of instruction and supervision in the use of the limb by the patient on the part of the medical attendant. On the subject of joint-mechanism, the author enters rather fully, but is, on the whole, restricted in his recommendation of it, any attempt to 'caricature' the natural movements being specially deprecated. India-rubber and spiral metal springs he considers troublesome and liable to get out of order; and he finds the same fault with the solid India-rubber foot, of which much was expected (viz., the amount of force needed to utilise its elasticity), which has been experienced by surgeons in this country. He has found the uncertainty in locomotion, accompanying the possession of a movable knee-joint, to exceed the advantages gained, and recommends a joint capable of flexion by pressure only, when the patient wishes to sit, supplemented by a movable ankle-joint. For poor patients, and those of the artizan class, his opinion coincides with that held by medical men in this country, recommending an ordinary wooden leg as cheaper at first cost, seldom needing repair, its use being easier to learn, and it being stronger and less likely to get out of order. A wooden leg with an enlarged lower extremity, working with a hinge between India-rubber buffer cushions, is favourably spoken of; and some interesting observations are appended, showing the influence of movable joints in equalising the length of stride with the artificial and normal limbs. For similar reasons, in the upper limb, the possession of an apparatus provided with complicated semi-automatic mechanism is restricted to the upper classes; a simple arm, into which various instruments can be screwed, being preferred for the artizan class.

The book is concluded by an appendix, containing tables of the cases on which the practical part of the work is based, and copies of regulations regarding the supply of artificial limbs to army pensioners (see also pp. 214 and 215). These, as showing the prime cost, cost of repairs, length of wear, etc., should render the book especially interesting and useful to naval and military surgeons.

The illustrations are collected into the form of a separate atlas, consisting of fifty plates, each comprising several engravings. The drawings are well executed in outline, and render great aid in comprehending the mechanism of the numerous apparatus described.

Although burdened with some repetition, and being for the ordinary reader somewhat lengthy in the historical section, the book nevertheless offers a fairly concise statement of our present knowledge of the subject, and, from its eminently practical nature, cannot fail to prove exceedingly useful to any surgeon needing instruction thereon.

G. H. MAKINS.

Handbuch der Historisch-geographischen Pathologie. By Dr. AUGUST HIRSCH.

Handbook of Historico-Geographical Pathology. By Dr. HIRSCH.

THIS work does not pretend to original research, but is a *résumé* of most of the best writings on epidemic diseases. In each case the history of the disease is

given, its geographical boundaries (where such exist), and its susceptibility to the influences of soil and climate; its fatality among various races, and the mode of its communication, are separately considered.

Scarlet fever is a disease of the temperate zone, and is almost confined to the north and centre of Europe and of North America. It occurs only in single cases in tropical regions, where it is of a mild type and does not spread. The coloured races are almost entirely free from it.

Malarial fevers, on the contrary, are far most prevalent and fatal in tropical and subtropical countries, particularly in Bengal, Bombay, China, and on the African coast; in Europe they are common in Russia, the neighbourhood of Rome, and the valley of the Po; while in Australia, Tasmania, and New Zealand such diseases are practically unknown, or occur only among troops recently arrived from India. The Ethiopians suffer least from malarial fevers, which are very fatal to the Caucasian Race. That malaria is not confined to low marshy districts alone, is shown by its prevalence on the dry Roman Campagna and on the plateau of the Deccan; still the conclusion drawn is, that a damp marshy soil under the influence of a high temperature is a very important factor in inducing malaria, but is not sufficient to cause it without the previous existence of a specific bacillus; this view has lately received remarkable confirmation by the experiments of Klebs and Tommasi-Crudeli. According to Colin, malaria is caused by the 'puissance végétative du sol', where there is not a sufficiency of plants to absorb this fertilising power.

Apropos of the malaria bacillus, the following experiment is related. Several boxes filled with earth from a highly malarial district were transported to a district where malarial fevers were unknown. They were placed outside the windows of a room in which two young men slept, and during the night the windows were left open. After six days both the inmates complained of illness, and on the twelfth and fourteenth days respectively were attacked by malarial fever, which yielded to quinine.

Yellow fever is a disease of the tropics, prevailing chiefly on the sea-coast, and on the banks of large navigable rivers. Heat of 80 deg. or upwards is necessary to the rise of the fever, which, however, will continue at a lower temperature; and 'to terminate, an epidemic ice must form on the surface of the ground'. Yellow fever, Dr. Hirsch maintains, is not a malarial fever; it exists, with rare exceptions, only in large towns, and is extremely fatal on shipboard. It is especially dangerous to new-comers from cool latitudes, but natives and acclimatised persons possess comparative immunity from it.

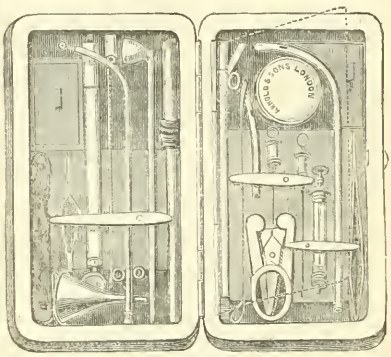
The article on malarial fevers is perhaps the best in the book; but all the articles are carefully compiled, and will be very valuable for reference.

Angel Money, M.D.

NEW INVENTIONS.

SURGICAL POCKET-CASE.

This surgical pocket-case, designed by Mr. W. A. Thomson of Ampthill, and manufactured by Messrs. Arnold and Sons, for the purpose of supplying surgeons and general practitioners with a complete, portable, and compact case of really useful and necessary instruments, to be carried during the daily rounds of visiting, as well as when sent for to an urgent and unknown patient. The case contains nearly everything a surgeon can require on an emergency, besides many things of daily utility and necessity; and, instead of pondering over what instruments are to be taken out each round, or to a sudden call, the surgeon has simply to put this case (besides his stethoscope) in his pocket, and thereby save much time, and perhaps gain much credit, by having what he will require with him, instead of having to send or go back for the necessary article.



One side of the case contains a clinical thermometer and caustic-holder (combined), in plated metal case; Corrigan's actual cautery-button and director (combined); Bellocq's epistaxis-cannula; finger-saw; exploring needle, in ivory case, with screw fittings to act as handle to the saw; Toynbee's ear-speculum, holding litmus paper, and constructed to act also as a tracheotomy-tube, if desired; bull-dog forceps; straight bistoury; gum lancet; Fergusson's knife and aneurism-needle, mounted together in tortoise-shell; and a compartment to hold lamels, discs, and vaccine points.

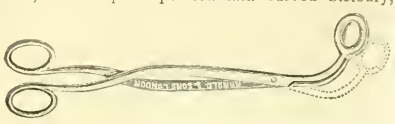
The other side contains dressing forceps; medium-sized silver-plated catheter, adjustable as male or female; probe (inside catheter); Chesterman's patent metal measuring tape; hypodermic syringe and needles; aspirating needle, fitting to the hypodermic syringe; folding steel scissors; Imray's double ear-scoop; and a compartment for thread, wire, and surgical needles. In all, there are twenty-five full-sized, efficient, and highly finished instruments, besides the other necessaries before-mentioned, all of which are held securely together in their proper places by means of metal pivot bands.

The case measures about five and a half inches in length, three in width, and one deep. It is shaped and opens like an ordinary cigar-case, with the addition of a thin leather leaf in the middle, useful for holding plaister, lint, oiled silk, etc.

INSTRUMENT FOR EXCISION OF TONSILS.

Dr. Studdert, Surgeon to the Erith Cottage Hospital, having recently been called upon to excise a number of enlarged tonsils, has used an instrument, invented by himself, and manufactured for him by Messrs. Arnold and Son, with the greatest success,

of which the following is an illustration. The mode of his operation is as follows. Having firmly grasped the tonsil, he draws it towards the mesial line; and then, with a probe-pointed and curved bistoury,

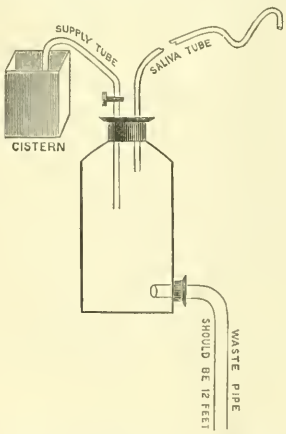


rapidly cuts through the tissues, 'keeping the blade in direct contact' with the enlarged grasping end of his forceps. The following are the advantages which Dr. Studdert claims for this instrument. 1. It is extremely simple and easy of application. 2. By attending to his direction of keeping the blade of the bistoury in contact with the blades of the forceps, all danger of hæmorrhage from wounding the internal carotid artery is avoided. 3. The instrument can be used for either the right or the left tonsil. 4. The groove on the edges of the circular blade gives great grasping power.

A NEW SALIVA EJECTOR.

Messrs. Smale Bros., have a new saliva ejector, invented by Mr. Morton Smale, and recently exhibited by him at the Odontological Society of Great Britain. It is, perhaps, best described in his own words.

'I have it fitted to my operating room. Its advantages are its simplicity, its always being ready for use, occupying little space, and doing its work thoroughly; after some months' trial, I am perfectly satisfied with it in every way. The suction would, probably, be sufficient to carry away blood, and would be very useful in operations in the mouth. I have not yet been able to try this, but hope to do so when I have a long case of extraction.



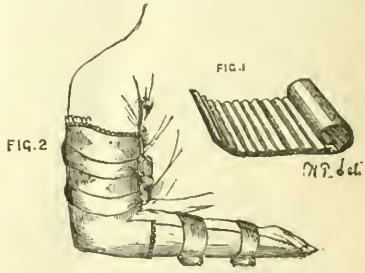
'The things necessary are a cistern above the operating room, a bottle, and some tubing of two different calibres. The water coming from the cistern is regulated by a tap in the operating room; for, when once working, very little water is necessary to keep it going. Directly the water rises above the level of the waste-pipe, it runs over into it, taking the air with it. No air can enter save through the saliva pipe (both corks being hermetically sealed), and, consequently, the suction in that tube is very great; and if the bottle be put under the floor, or under a chair, gravitation, in addition to suction, helps the process. The waste-pipe must be larger than the supply-pipe, and should be about twelve feet long. It is best to carry that tube out through the wall or window-sash, and to let it enter the water-pipe on the outside of the house. In my own case, this tube is put through the floor of the operating room into the kitchen, and through the kitchen window, and into the water-pipe. Messrs. Smale Bros., of Marlborough Street, have one fitted up, and in working order; or I shall be glad to show my own to anybody wishing to see it. I find it useful, not only when stopping, but also taking impressions, or when cooling impressions with water, to run off the water from the mouth. For the idea and practical carrying of it out, I am indebted to my friend Mr. Fairles.'

CHEKAN.

Messrs. Wyley and Co., of Coventry, have introduced to the notice of the profession some preparation made from the leaves of the *Eugenia* or *Myrtus Chekan*, an evergreen shrub somewhat resembling the ordinary myrtle, and indigenous to Chili. Messrs. Wyley's preparations comprise three samples of liquid abstract of chekan of varying strengths, and a syrup of chekan, half the strength of the liquid extract, and especially recommended for children in the place of the liquid extract. We have also received samples of an essential oil of chekan, to be used for inhalation in cases of diphtheritis, laryngitis, and diseases of that order. This new therapeutic agent has been tried by English hospitals in bronchitis and bronchorrhœa, and Dr. Murrell reports very favourably of the results he has obtained from it, especially in chronic bronchitis. Chekan has also been successfully employed by continental physicians in inflammatory affections of the pharynx and larynx, and in catarrhal cystitis, gonorrhœa, and leucorrhœa. The London agents for the sale of the chekan preparations are Messrs. Wyley, Walker, and Co., 223, Upper Thames Street, E.C.

A NEW MATERIAL FOR SPLINTS.

The following is a description of a new material out of which splints may be fashioned, of which the accompanying woodcut is an illustration. The ma-



terial is chiefly useful as a cheap substitute for the well-known 'kettle-holder' splinting, which consists

of chin strips of wood glued on to canvas or leather, so that there is flexibility in one direction, with stiffness in the other. In the new material, the same end is attained by the principle of corrugation. It consists of two layers of stiff brown paper glued together, one flat, and the other plaited into ridges and furrows. A remarkable degree of stiffness in the direction of the corrugations is thus secured, while at right angles to them there is complete flexibility.

The material is extremely light, and the tunnels which the corrugations form serve for ventilation, and are very useful in keeping the limb contained in the splint cool; while, if extra stiffness be required, wires of any useful thickness may be passed through them. Another way of increasing the strength of the splint is to use two layers of the material placed face to face, so that the corrugations fit into each other; in this way the stiffness is doubled with hardly any increase of bulk, and a full-sized back splint for the patella, abundantly strong, but very light, may in this way be cut out with a pair of ordinary scissors in a couple of minutes.

Mr. Walter Pye has found the greatest employment for this material in the fashioning of angular elbow-splints, as shown in the cut, especially in the case of arthritis in children, where the lightness and coolness of the support are much appreciated. He finds that ordinary webbing straps and buckles are the most convenient way of securing the splints round the limb. The material being paper, it is not fitted for any cases where there are discharges, or where moist dressings are employed, for it soon becomes sodden. The makers are Messrs. George M. Smith and Co., 47½, Arlington Street, Islington, N., and it is extremely cheap.

In connection with this subject of corrugation of splinting materials, Mr. Oates of Malvern Wells writes (*Brit. Med. Jour.*, March 25) that, twenty years ago, he began to employ thin metal splints, corrugated so as to give them necessary stiffness. These would of course be able to be washed, and no doubt the principle might be applied to other materials as well, though few would be as light as paper, or so readily fashioned.

A RATIONAL BOOT.

The human foot has suffered, perhaps as much as any portion of the body, from following the vagaries of fashion—in one sense, probably more so, as both men and women indulge in that particular shape of covering for the lower extremities, the prevalence of which is dictated by fashion; while in that of tight lacing the 'weaker' sex are alone the foolish exponents of a system that carries injury to health and comfort in its train. It will be recollected by many of our readers, that Professor W. H. Flower, some time since, in lecturing on 'Fashion in Deformity' at the Royal Institution, spoke particularly on the manner in which boots and shoes are made in all parts of the civilised world, saying they were constructed upon a principle of bilateral symmetry. He observed, 'a straight line drawn along the sole from the middle of the toe to the heel will divide a fashionable boot into two equal and similar parts, a small allowance being made at the middle part or "waist" for the difference between right and left foot. Whether the toe is made broad or narrow, it is always equally inclined at the sides towards the middle line, whereas in the foot there is no such symmetry.'

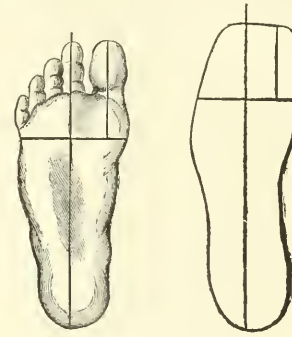


Fig. 1.

The accompanying engravings of the foot in its natural form, and as it appears in its deformity, brought about by wearing 'tight' or 'fashionable' boots, render further remark unnecessary. Mr. Flower

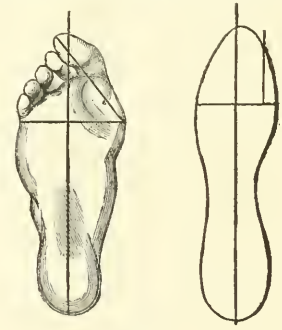


Fig. 2.

also remarked, that no sensible person can suppose that there is anything in itself ugly, or even unsightly, in the form of a perfect human foot; and yet all attempts to construct shoes upon its model are constantly met with the objection that something extremely inelegant must be the result. The effect of this lecture was so impressed upon the mind of Mr. Thomas Parker, of 175, Oxford Street, that he immediately turned his attention to the construction of a boot based upon Professor Flower's views, and the 'Alukipos' boot is the outcome of his ideas. The other two illustrations represent the shape of the 'Alukipos' boot, and that of those ordinarily made.

The new boot is made of soft pliable leather, cut quite seamless on the inner side, and is specially

adapted for those, who, apart from having injured the *contour* of their feet by wearing the fashionable-shaped shoe or boot, naturally suffer from tender feet or swollen joints, while for gouty or rheumatic persons it is invaluable. It is made both for ladies, for gentlemen, and for children; and, if worn for a short time would, we believe, soon cause prejudice as to shape to give way, in the increased comfort and freedom from all pain which its adoption would bring about.

MISCELLANY.

THE Rev. J. M. Strachan has been appointed Bishop of Rangoon. Dr. Strachan is a Doctor of Medicine.

THE great Lecaze prize of 10,000 francs has been awarded to Dr. Brown-Séquard for his valuable researches and discoveries in physiological science.

THE RADICAL CURE OF CANCER.—Dr. J. Collins Warren of Boston, U.S.A., in October last, who was delegated to receive competing essays on the subject of the radical cure of malignant disease, announces that three essays were presented. In the consideration of their merits the assistance of Dr. George B. Shattuck, editor of the *Boston Medical and Surgical Journal*, was invoked; and it has been decided that no essay is worthy of a prize. The same subject, namely, 'The Probability of the Discovery of a Cure of Malignant Disease, and the Line of Study or Experimentation likely to bring such a Cure to light', is proposed for essays to be presented in competition not later than the first day of December, 1883, to Dr. Warren, who, with such assistance as he may select, will be the judge of their merits. For the best essay on the above subject a prize of One Thousand Dollars will be given, the right being reserved to withhold the prize in case no essay of sufficient merit be presented. The essays must be legibly witten in English, and neatly bound. Each one must bear a motto, and be accompanied by a sealed envelope bearing the same motto, and inclosing the name and address of the writer. They will all remain in the possession of the donor of the prize for convenience of reference, and the privilege is claimed to publish the successful one, with the name of the writer. No writer, however, surrenders the privilege of retaining a copy of his essay, and publishing it. The decision concerning the merits of the essays will be made chiefly from a practical stand-point, it being the object of the donor of the prize to obtain suggestions by which a search for a cure for cancer may be instituted.

A CASTOR-OIL FAMINE.—The prospect of a castor-oil famine is held out in a recent issue of the *Liverpool Journal of Commerce*, which publishes a series of figures to show that the stock at present held in this country and afloat for importation is considerably less than was the case at the corresponding period of 1881. The following figures explain the position:—Quantity afloat for United Kingdom this time in 1881, 27,681 cases; quantity afloat for United Kingdom at present, 18,263 cases; decrease, 9,418 cases. Average consumption per month, 1881, Liverpool, 4,900 cases; consumption for month of January 1882, 7,500 cases; increase, 2,600 cases. Stock in Liverpool on February 1, 1882, 8,300 cases; afloat in ships now due, 1,476 cases; total supply up to middle of March, 9,776 cases. Probable consumption up to middle of March, 10,000 cases. It is, therefore, probable, that about the middle or end of March supplies will fall short of the demand, and, as a necessary consequence, unless there is a diminution of consumption, or early arrivals of vessels carrying castor-oil as a whole or part cargo, prices will rise in proportion to the scarcity experienced.

THE GREAT SEA-ELEPHANT.—A very interesting addition has been made to the Museum of the Royal College of Surgeons; a skeleton of the great sea-elephant (*Macrorhinus Leoninus Linn.*), the largest of the seal tribe. The animal derives its name from its huge size, and from the possession in the male of a short proboscis-like prolongation of the nose. It was formerly abundant on most of the coasts and islands of the Southern Ocean, but has now, owing to the destructive warfare carried on against it by sealers for the sake of its valuable oil and hide, become much more rare, and limited to the most inaccessible parts of the Kerguelen and Crozet groups. In the Falkland Islands it was supposed to have been long extinct, but, about two years ago, Mr. H. Mansel, when riding along the coast, saw what he at first took for a boat lying upside down upon the beach. On approaching nearer, he found that it was a great seal asleep. When roused, it reared itself upon its hind quarters and opened its enormous mouth to its full extent, in the manner depicted in the well-known quaint old drawing in Anson's *Voyages*. The next morning, the animal was found at the same place and despatched, and its head was sent to the Museum of the College of Surgeons. As there was no skeleton of a full-grown specimen of this interesting species in England, Professor Flower, the conservator of the Museum, lost no time in requesting friends in the Falkland Islands to endeavour to secure what remained of the body of the animal; and, although it had lain more than a year where it fell, Captain R. C. Packe of Stanley was fortunate enough to be able to secure the greater part of the bones, which have now been mounted, and the nearly perfect skeleton is exhibited in the Museum. It is placed near and can be well compared with its congeners, the walrus, sea-lion, and fur seal. Five skeletons of the two latter species, also from the Falkland Islands, have recently been added to the collections through the kind assistance of Mr. F. Coleman, Secretary to the Falkland Islands Company, who loses no opportunity of rendering his connection with the islands of service to the advancement of science. The extreme length of the skeleton is 16 ft. 6 in., and it is quite easy to imagine how such a creature swimming rapidly through a calm sea with its head raised, and with a long wake behind it, caused by the action of its paddles, placed at the posterior extremity of the body like the screw of a steamer, may have been the foundation of some of the stories told of the great sea-serpent, as was, indeed, suggested some years ago by Professor Owen on the occasion of the reported appearance of that celebrated monster to Captain M'Quhae.

A NEW METHOD OF EMBALMING BODIES AND PRESERVING TISSUES.—Dr. Virodtzeff (*Balsamirovanie*, pp. xi, 164, St. Petersburg, 1881) recommends the following preparations as an efficient agent in the embalming of bodies and the preservation of tissues:

Thymol	5 parts.
Alcohol	45 ,,
Glycerine . . .	2,160 ,,
Water	1,081 ,,

It is cheap, innocuous, free from unpleasant odour, possesses the property of keeping the body soft, elastic, fresh and life-like, and does not ruin instruments. Thymol is selected as being superior to other antiseptics, and glycerine is added, both on account of its own preservative qualities and to retard the evaporation of the fluid. For the preparation of tissues the same solution is employed. If the cadaver be quite lean, or the tissues very delicate, equal parts of water and glycerine (1,620 of each) are combined with the above quantities of thymol and alcohol. To inject a body, half its weight of the fluid is necessary. A properly embalmed cadaver may be preserved indefinitely under ordinary circumstances, gradually shrinking and mummifying without putrefaction. Specimens are either to be injected with or macerated in this fluid. Maceration must not be too prolonged; the appearance of the specimen should act as a guide. The part, after having been thoroughly cleansed with water, and prepared, may then be exposed for months to the air without losing its consistency, form, and colour. Permanent specimens may be enclosed in a hermetically sealed glass vessel containing a little of the same solution. Dr. Peabody has used this preserving fluid, with excellent results, in the New York Hospital Museum.

ATTENTION IS SPECIALLY CALLED TO

QUINAMINE

AMORPHOUS UNCRYSTALLIZABLE QUININE, with other constituents of PERUVIAN BARK, CINCHONIDIA, QUINIDIA, and CINCHONIA, with some Colouring Matter, prescribed in the same manner and dose as Quinine.

The experience of old practitioners confirms the belief that preparations of the Peruvian Bark in many cases are more potent in arresting intermittents than Quinine, therefore a preparation comprising the average constituents of Peruvian Bark, definite in its composition, supplies a want long felt, and it is this which induces us to offer Quinamine as the most desirable preparation in lieu of Quinine. We are free to confess our belief that there is no substitute superior to Quinine, that is to say, that there is no substance equally as potent and reliable now discovered that will replace this valuable and well-tried remedy; but there has been an increasing demand for a cheaper substance than Quinine, and in accordance with this requirement we have made the nearest approach to what is desired, in the discovery of the new Anti-periodic, Quinamine. Excepting Amorphous Quinia, the other constituents of Quinamine have long been used with much success.

North Amherst, Mass., April 1st, 1880.

Messrs. WM. WARNER & Co.

Gentlemen.—I like your QUINAMINE so well that you may send me an ounce. * * * *

WM. DWIGHT, M.D.

Chicago, May 19th, 1880.

Messrs. WM. R. WARNER & Co.

Gentlemen,—I have had some opportunity to test the merits of your QUINAMINE. I permit me to say that it has met my expectations as a substitute for the Sulphate of Quinine, and I cheerfully offer my testimony in its favour.
—Sincerely yours, C. C. HIGGINS, M.D.

PRICE 6s. PER OUNCE BOTTLE.

Prepared only by WILLIAM R. WARNER & Co., Manufacturing Chemists and Wholesale Druggists (Physicians' Supplies a Speciality), PHILADELPHIA.

SOLE DEPOT FOR THE UNITED KINGDOM,

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ESTABLISHED A.D. 1746.

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PERMANENT AND SOLUBLE SUGAR-COATED PILLS.

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PARVULES (Or Minimum Doses for Children and Adults).

INGLUVIN (A Potent Specific for Vomiting in Pregnancy, Pronounced Atonic Dyspepsia, etc., etc.).

AND OTHER APPROVED PHARMACEUTICAL PREPARATIONS.

Specimens of the numerous opinions which are from time to time received by the London Agents, from members of the medical profession who prescribe these preparations, or employ them in their practice:—

Messrs. WARNER & Co. London, 24th Feb. 1881.

Gentlemen,—I have great pleasure in stating that I find, amongst the many COATED PILLS I have used, yours, which are sugar-coated and pleasant to take, are *by far the most soluble*, and I can recommend them to practitioners in preference to all others, their action being sure.—Yours truly, C. J. RIX, M.R.C.S.Eng., L.M. and L.S.A.Lond.

Messrs. NEWBERY & SONS. March 1881.

Gentlemen,—I have great pleasure in bearing testimony to the therapeutic value of Messrs. Warner & Co.'s PIL. CATHART. CO. (VEGETABLE). During many years of active practice I have found *nothing to equal them* as an effective yet mild purgative. In costiveness arising from hepatic torpor, or obstruction in the Duct, the relief they afford both physically and mentally is most gratifying. I should now feel quite at a loss without them. Their unique appearance and pleasant taste well add to their reputation. The proprietors give the formula on each bottle.—I am, faithfully yours, E.D. COTEW, L.R.C.P., L.S.A. London.

Stanley House, Blackstock Road, Finsbury Park, N., February 1881.

Gentlemen,—With pleasure I testify to the elegance and efficacy of your SUGAR-COATED PILLS, having used them extensively,—and many of the different kinds,—and found their action certain. In a very extensive midwifery practice, I have also found INGLUVIN of very great service for all the purposes it is intended to effect.—JAS. CARNEGIE GIBSON, L.R.C.P., L.R.C.S., L.M.

Messrs. W. R. WARNER & Co.

8, Cumberland Terrace, Finsbury Park, N., 25th February 1881.

Gentlemen,—I have tried several of your SUGAR-COATED PILLS, and believe that they are most efficient in their action, and a dependable mode of administering medicine. They are certainly *the best in appearance* I have ever seen, and the most pleasant to take.—M. C. SOUTTER, M.R.C.S. Eng., etc.

Practitioners are requested to prescribe 'Warner & Co.' Should any Chemist not have in stock any desired formula, it will be mailed direct from the Depot on receipt of price.

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Award of Merit,
International Medical and Sanitary Exhibition, 1881.

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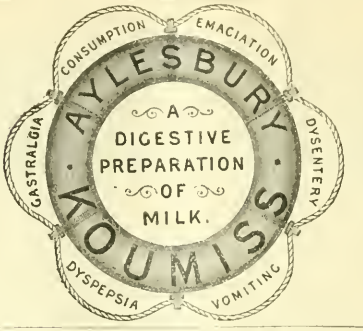

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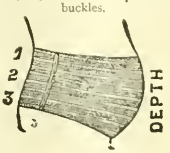
P. BOURJEAURD,
INVENTOR OF THE ELASTIC SPIRAL APPLIANCES.
49, Davies Street, Berkeley Square, London, W., also at Paris and Marseilles.

Spiral Elastic Belt and Air Pad for Prolapsus Uteri or Ani.
ESTABLISHED 1848.

Spinal Abdominal Supporter, free from under straps and buckles.



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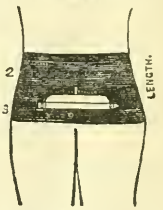

Hypogastric Belt and Air-pad supporter for the displacement of the womb.

Mr. Bourjeaurd's appliances are made of an extremely fine and large texture, and wash as ordinary linen. Illustrated Catalogue free by post.

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Of his Imperial and Royal Highness the Most Serene ARCHDUKE ALBRECHT are for the first time introduced into this country. The RED

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WHITE RIESLING,

at 24s. per dozen, are highly recommended. Sample Dozen Cases, at 30s., 37s., and 55s. delivered free in every part of the kingdom.

CAUTION.—The Bottles are protected by the seal of the Archducal Estate, without which none are genuine. Pamphlets free on application.

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Wine Merchants to Her Majesty the Queen; Sole Consignees for the above-named Wines for Great Britain, Ireland, and the English Colonies,

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A DELICIOUS BEVERAGE AND TONIC, Made from Port Wine, Liebig's Extract of Meat, and Extract of Malt: Nutritious, Strengthening, Stimulating, Flesh-forming, Health Restoring, Suitable for the Robust in Health, as well as the Invalid. Strongly recommended by the Medical Faculty. An Immediate Benefit is experienced after taking it; the Frame is Invigorated, and no ill effects follow.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE (COLEMAN'S).

TESTIMONIALS.

Thorpe Hamlet, Norwich, February 23rd, 1881.

Sir,—A short time since I was induced by the novelty of the title to send for a bottle of your Liebig's Extract of Meat and Malt Wine. I was perfectly acquainted with the value of the *Extractum Carnis*, and not quite a stranger to the invigorating and fortifying properties of Malt Wine, and, therefore, felt a natural curiosity to test them when combined. Men who work hard, as I do, not muscular hard work, but that which is quite as exhausting, viz., brain work, very often experience the need of, and have sometimes an almost irresistible craving for, a 'pick me up'; and very often the panacea for a time for lassitude, and that state of mind which renders work irksome, are alcoholic stimulants, the use of which must sooner or later end disastrously. The man who can furnish a remedy sure, certain, and harmless, for the lassitude which follows constant brain work, is a benefactor of his species, and may be said to have added many years of usefulness to the lives of useful men. Your extract, if a success, and when more generally known, will be used by all toilers of the mind.

Yours faithfully, O. D. RAY.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE (COLEMAN'S).

Queen's Crescent, Haverstock Hill, March 5th, 1881.

Dear Sir,—Some time since, being greatly fatigued with over-work and long hours at business, my health (being naturally delicate) became very indifferent. I lost all energy, strength, and appetite, and was so weak as to be scarcely able to walk. As you are aware, I sent for a dozen of your Extract of Meat and Malt Wine, which, in a few days, pulled me up marvellously. Three or four glasses of it daily have quite altered and restored me to better health than ever, 'without the assistance of a doctor'. I am now giving it to my son twelve years of age, whom we have always thought consumptive, and from a puny ailing boy he seems to be fast growing into a strong healthy lad. Enclosed you have a cheque. Please send me two dozen of the 'Extract'. With thanks for your prompt attention to my last.

I am, Sir, yours truly, GEORGE A. TYLER.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE (COLEMAN'S).

Grampound, February 25th, 1881.

Mrs. Coulson thanks Mr. Coleman for the book and stamps, and she has no doubt but that 'the tonic' is a good one. Mrs. C. encloses twelve stamps for basket.

LIEBIG'S EXTRACT OF MEAT AND MALT WINE (COLEMAN'S).

Vicarage, Kingsbridge, Devon, January 25th, 1881.

Dear Sir,—We are ten miles from the railway, and have been snowed up, consequently the wine has only just arrived. I enclose a cheque for £2 11s. 6d. I like the wine, and will recommend it.

Mr. Coleman, Norwich. Yours faithfully, A. N. KINGSTON.

Pints, 27s. per dozen; Quarts, 50s. per dozen. Carriage paid to any Railway Station in Great Britain. Sample Bottle sent for 33 stamps.

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Sold by all Druggists and Patent Medicine Vendors in the United Kingdom, in Bottles, 2s. 9d. and 4s. 6d. each. Ask for **Coleman's Liebig's Extract of Meat and Malt Wine,** and 'See that you get it'.

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LEMON GINGERETTE.

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A WHOLESOME AND DELICIOUS BEVERAGE FOR HOT WEATHER.

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Introduced at the suggestion of the late Dr. Thos. Hawkes Tanner.

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In 1853, Dr. Glover prescribed Phosphorised Cod-Liver Oil (*Lancet* n. 1, 1853), 27 years ago and more. *Beware of spurious imitations.*

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PURE, MILD AND MELLOW. DELICIOUS AND MOST WHOLESOME.

THE CREAM OF OLD IRISH WHISKIES

Dr. Hassall says:—"Soft and Mellow, Pure, well Matured, and of very excellent quality.

The Gold Medal, Dublin Exhibition, 1865.

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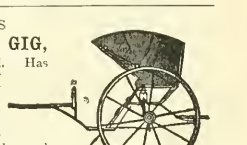
Improved DOCTOR'S GIG,



With removable leather hood. Has more advantages than Cab or Brougham; no oscillation or knee motion; one-third the weight and cost; any size or colour. See Letters in *Brit. Med. Jour.*, 1880 and 1881; *The Lancet*, Nov. 12, 1881.—Particulars and Drawings from Oldswinford Carriage Works, Stourbridge.

AERATED LITHIA WATER.—Messrs. BLAKE, SANDFORD & BLAKE are prepared to supply the LITHIA WATERS (of which they were the original manufacturers under Dr. Garrod's instruction) of any strength prescribed by the Profession for special cases. Those in constant use contain two grains and five grains in each bottle, either by itself or combined with BICARBONATE of POTASH or PHOSPHATE of AMMONIA. Also, POTASH, CITRATE of POTASH, SODA, SELTZER, VICHY, and MINERAL-ACID WATERS, as usual.

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THE 'BRITISH MEDICAL JOURNAL' REPORTS UPON SOME OF THE *New and Improved Pharmaceutical Preparations and Appliances which were Exhibited at the International Medical and Sanitary Exhibition, South Kensington, London.*

'Excellent and reliable specimens of a distinct improvement in pharmacy.'

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The following articles were exhibited by BURROUGHS, WELLCOME, and Co., of 7, Snow Hill, London.

The Burroughs Beef and Iron Wine. 'The useful preparation of beef and iron wine, which we believe is coming rapidly into favour. Some of our most eminent physicians, who have given it a trial, speak of its efficiency, both in acute and chronic cases, in very high terms. It is a concentrated preparation, and bears a large dilution with water; and, in this condition, is readily taken by delicate persons and children unable to assimilate the usual tonics and nutrients.'

'It is a pleasant tonic and mild stimulant; it will be found useful in cases where the use of a blood tonic is indicated. The ordinary dose for an adult is a tablespoonful, which should be taken in a little water between meals; children also may take it in smaller doses according to age.'

Wyeth's Compressed Tablets. 'Are intended to replace the lozenges in ordinary use. No excipient is used: the tablet consisting only of the salt itself, firmly compressed into a lenticular shape by hydraulic machinery. The tablet of Chlorate of Potash, and of the same salt combined with Chloride of Ammonia, are especially convenient; each contains five grains; they dissolve slowly in the mouth, and are not as big as a threepenny bit. The compressed Tablets of Chlorate of Potash are now frequently prescribed by most medical men in affections of the throat.'

'We especially recommend the compressed chlorate of potash.'

'Our attention was called to Wyeth's new compressed tablet of small dimensions called Soda-mint, compound of bicarbonate of soda and carbonate of ammonia, with oil of peppermint in minute quantity. It is consequently very prompt and efficient in correcting acidity and the dyspepsia produced by it; it is also useful in heartburn, colic, and flatulence. This is obviously a very efficient combination, and the tablets themselves are manufactured with the utmost neatness and perfection. The very convenient form in which they are presented facilitates their use by travellers, business and professional men of all kinds, inasmuch as they are highly portable, dry, and easily carried in the waistcoat pocket.'

Wyeth's Dialysed Iron. 'Their preparation of this very valuable ferruginous medicament is one of the best we have seen, and as there is much evidence that preparations of so-called dialysed iron of very inferior quality are in use, this one deserves attention. Here, again, we draw attention to the mode in which it is sent out. Each bottle is enclosed in a paper case which contains an extra cork and an ingenious arrangement for the patient estimating the dose he should take. This consists of a glass tube, drawn to point at one end and at the other furnished with an India-rubber ball. On compressing the ball, putting the pointed end into the bottle, and relaxing the pressure, the tube fills, and the requisite quantity can then be dropped into a wineglass or suitable vessel.'

'An excellent preparation of dialysed iron.'

McKesson & Robbins' Capsuled Pills. 'We find McKesson and Robbins' capsuled pills of quinia bisulphate (or soluble sulphate) worthy of special commendation. The bisulphate of quinine is much more soluble than the ordinary sulphate. This advantage will be readily appreciated by practitioners, as it ensures more prompt action of the quinine. The covering of these pills entirely masks the taste of the drug for a sufficient time to allow of swallowing, but if a pill be retained in the mouth, it will completely dissolve within a very few minutes. These new and beautiful preparations are, in several respects, a decided improvement over any form of pills that has yet come under notice. They well deserve the confidence and favourable consideration which they have gained from the profession for purity and integrity. Practitioners who dispense their own medicines will recognise these preparations as a great convenience. They are especially well suited for filling medicine chests for travellers and explorers, as they preserve their qualities in all climates.'

'The McK. and R. Pills are ovoid in form and are coated with transparent gelatine, which dissolves if the pill be held for a minute or two in the mouth. The gelatine coating is perfectly sealed and protects the pill mass from the action of the air; this is especially well seen in the case of the Phosphorus Pills.'

'The pills of McKesson and Robbins are quite of the highest class of merit in respect to the method, in respect to the materials, and in respect to results.'

'The McK. & R. Caps. Pills are beautiful in appearance, the colour of the medicine showing clearly through the thin but perfect and soluble covering of gelatine. Their oval shape appears to give them great advantage over the round form of pill, as they are much more easily swallowed. They are all that can be desired in point of solubility, as the covering of gelatine is put on while the mass is soft. If one of their Quinine Pills be placed on the tongue (this is the best and most reliable test of solubility) the taste is at first entirely imperceptible, until in about half-a-minute the covering dissolves and the mass itself, being soft, dissolves in about two minutes more.'

The Burroughs Hazeline. 'Hazeline, the active principle distilled from the bark of the Witch-Hazel, is a clear limpid fluid, with mildly antiseptic properties; it is much used in the treatment of catarrh, and as a local application in ulcers and erythematous affections.' The following Report was communicated to the *British Medical Journal*, June 18th, 1881. "Having during the past few months given a somewhat extended trial to the new product of Hamamelis Virginica called 'Hazeline', I beg to place the following memoranda at the disposal of the readers of the *Journal*. As a local application in irritable and inflamed piles situated at the margin of the anus, where the remedy can be readily applied, I have never met with its equal. In most of the cases submitted to the treatment the relief was immediate and permanent. My plan has been to have the part bathed in the solution three or four times a day, and a piece of lint, dipped in it, kept applied to the anus during the intervals. All urgent symptoms have passed away, as a rule, in from twelve to twenty-four hours. In chronic and intractable ulcers of the varicose or eczematous description, I have met with excellent results by using the Hazeline after the fashion of a water-dressing. I may add that about two hundred cases of ulcerated legs pass through my wards annually.—WILLIAM HENRY NETHERCLIFT, Med. Supt. of the Chelsea Infirmary.'

Kepler Extract of Malt. 'This improved Extract of Malt has now been under trial for some time in this country, where malt extracts are coming into use, and is very favourably spoken of by physicians, both in respect to its nutritive and digestive properties, and as being of a very agreeable flavour. Being prepared at a very low temperature, its qualities are not deteriorated or its flavour spoiled in the preparation. The malt-extracts have long enjoyed a very considerable reputation in Germany, Switzerland, and America; and it is probable that, as English practitioners become more familiar with them, they will to a considerable extent take the place of animal oils, such as cod-liver oil, which are not always easily borne by the stomach, and which it is difficult to render palatable. Combined with cod-liver oil, malt extract appears to increase the nutritive powers of the oil, and to render it more easily digestible. We can recommend the Kepler Extract of Malt as being of a very high quality indeed.'

'Kepler Extract of Malt has already been favourably noticed in our columns; it is a well made and palatable preparation.'

Apollinaris

EXTRACTS FROM RECENT HOSPITAL REPORTS.

Charing Cross Hospital, W.C.; *July 9th*, 1880.

As regards the use of Apollinaris water in this Hospital, I can only give my own experience. The class of cases for which the water is specially adapted as a remedial agent, seldom makes its way into our Hospitals, and my experience has, consequently, been entirely limited to its use as a dietetic. I have long been accustomed to use milk and soda water as food and drink in many cases where digestion is feeble, and the stomach irritable, but practically, I have found that in private cases where the mixture was made at bedtime to last for use throughout the night until morning, it soon became unpalatable. This is much more likely to occur in the crowded wards of Hospital than in a private room, and, accordingly, I set myself to find out by actual experiment relative values of such a water as Apollinaris, and ordinary soda or other artificial water. were carefully conducted, the circumstances being precisely similar; and it was found Apollinaris Natural Mineral Water the milk remained far longer sweet and palatable artificial compound. Moreover, from its constituents, the Apollinaris is likely to be beneficial in the cases I refer to, than ordinary soda water would be.

(Signed) ALEXANDER SILVER, M.A.,
Physician, &c., to Charing Cross [illegible]

German Hospital, Dalston; *July 28th*, 1880.

I have been instructed by the Committee of our Hospital to acknowledge the receipt of your letter addressed to them, respecting the result of the use of the Apollinaris water, with which your Company has been kind enough to supply our Hospital now already for some time.

Our Committee have referred the matter to our resident medical officers, and they have been assured by them that the Apollinaris water, as supplied by your Company, has been and is still in use in our wards, and that it is found an agreeable, refreshing, and useful drink for invalids and convalescents. (Signed) A. WALBAUM, D.D.,
Hon. Secretary.

(Translation.) 'The Apollinaris Natural Mineral Water was used during the summer of 1879 at the Royal and Imperial Hospital, "Wieden", in the Medical Department of Drs. Ritter von Eisenstein and Oettinger and in the Surgical Department of Professors Drs. Mosetig and Ritter von Moorhof and of Dr. Kumar.

'From the reports of these gentlemen, the senior physicians to the Hospital, it follows that Apollinaris Water excels other Mineral Waters in purity and agreeable taste, but chiefly in the extraordinary quantity of carbonic acid gas which it contains, and that it thus deserves preference over other mineral waters in cases where the action of carbonic acid is indicated.

'The Water has proved itself to be a cooling and refreshing drink in febrile and acute affections, and has been employed with favourable results in cases of catarrhal diseases of the bronchial, digestive, and urinary organs.' (Signed) Dr. LORINSER,
December 29th, 1879. *Direction des K.-K. Krankenhauses, Wieden, Vienna.*

Additional testimony and information may be obtained on application to

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